DENON

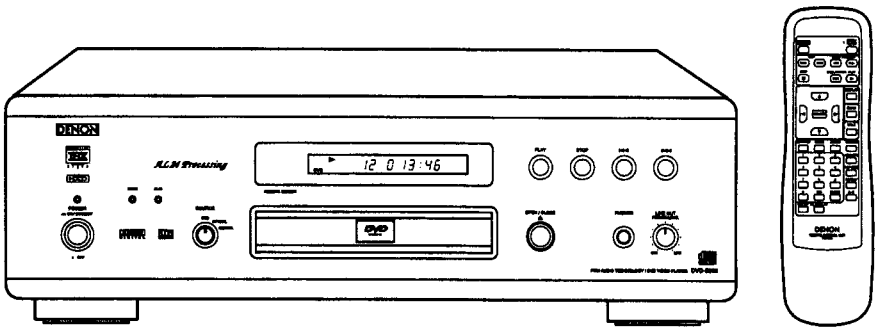
Digital Player

V30178

SERVICE MANUAL

MODEL DVD-5000

DVD VIDEO PLAYER



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● **Some illustration using in this service manual is slightly different from the actual set.**

NIPPON COLUMBIA CO., LTD.

SAFETY PRECAUTIONS

The following check should be performed for the continued protection of the customer and service technician.

LEAKAGE CURRENT CHECK

Before returning the unit to the customer, make sure you make either (1) a leakage current check or (2) a line to chassis resistance check. If the leakage current exceeds 0.5 milliamps, or if the resistance from chassis to either side of the power cord is less than 460 kohms, the unit is defective.

SPECIFICATIONS

Signal system:	NTSC	
Applicable discs:	(1) DVD/video discs 1-layer 12 cm single-sided discs, 2-layer 12 cm single-sided discs, 2-layer 12 cm double-sided discs (1 layer per side) 1-layer 8 cm single-sided discs, 2-layer 8 cm single-sided discs, 2-layer 8 cm double-sided discs (1 layer per side) (2) Compact discs (CD-DA, Video CD) 12 cm discs, 8 cm discs	
S-Video output:	Y output level: 1 Vp-p (75 Ω/ohms)	C output level: 0.286 Vp-p (For U.S.A. & Canada models)
	Output connectors: S connectors, two sets	C output level: 0.300 Vp-p (For Eutope/Asia/Taiwan R.O.C. models)
Video output:	Output level: 1 Vp-p (75 Ω/ohms)	Output connector: Pin-plug jacks, two sets
Component output:	Y output level: 1 Vp-p (75 Ω/ohms)	
	Pb output level: 0.648 Vp-p (75 Ω/ohms)	Pr output level: 0.648 Vp-p (75 Ω/ohms) (For U.S.A. & Canada models)
	Pb output level: 0.700 Vp-p (75 Ω/ohms)	Pr output level: 0.700 Vp-p (75 Ω/ohms) (For Europe/Asia/Taiwan R.O.C. models)
	Output connector: Pin jack, one set	
Audio output:	Fixed output level: 2 Vrms, 1 set	Variable output level: 0 to 2 Vrms, 1 set
Audio output properties:	(1) Frequency response	
	① DVDs (linear PCM) : 2 Hz to 22 kHz (48 kHz sampling)	
	: 2 Hz to 44 kHz (96 kHz sampling)	
	② CDs : 2 Hz to 20 kHz	
	(2) S/N ratio	
	① DVDs : 118 dB	
	② CDs : 118 dB	
	(3) Total harmonic distortion	
	① DVDs : 0.0015 %	
	② CDs : 0.0018 %	
	(4) Dynamic range	
	① DVDs : 108 dB	
	② CDs : 100 dB	
	(5) Channel separation	
	① DVDs : 110 dB	
	② CDs : 110 dB	
Power supply:	AC 120 V, 60 Hz (For U. S. A. & Canada models) / AC230 V, 50 Hz (For Europe model) / AC115/230 V, 50 Hz (For Asia/Taiwan R.O.C. models)	
Power consumption:	40 W	
Maximum external dimensions:	434 (width) x 135 (height) x 374 (depth) mm (not including protruding parts)	
Weight:	16.5 kg	

■ Remote control unit: RC-540
Type: Infrared pulse
Power supply: DC 3V, two SUM3 batteries

DISTRUCTIVE ELECTRO STATIC DISCHARGE (ESD) TO TRAVERSE LASER PICKUP

The laser diode in the traverse unit (laser pickup) may be damaged by static electricity charged in your cloth or body. Be careful not to damage it by ESD when handling for servicing.

Handling of Traverse Unit (laser pickup)

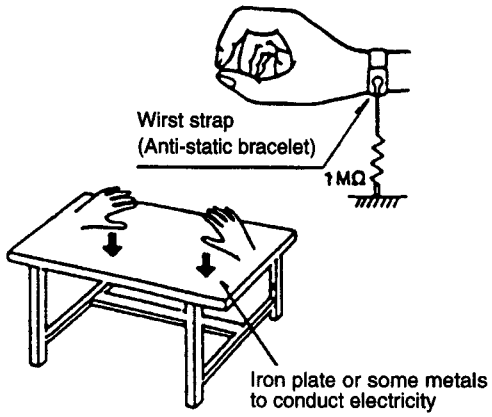
1. Do not apply a strong shock to the traverse unit (laser pickup) since it is made of precise structure.
2. To prevent the breakdown of the laser diode, install the flexible cable after removing the short pin for preventing a electrical charge. When removing or connecting the short pin, finish the job in as short time as possible.
   Also, cut out the short land of the flexible cable using nippers and etc. after replacing the optical pickup. Refer to "REPLACING THE MAIN PARTS OF THE TRAVERSE UNIT" in this manual for the handling of the traverse unit.
3. Be careful not to apply excessive stress to the flexible board (FPC Board) since it may cause cutting.
4. Do not turn the variable resistor of the laser power since it is not adjustable.

Grounding for electrostatic breakdown prevention

1. Human body grounding
   Use an anti-static wrist strap to discharge the static electricity from your body.
2. Work table grounding
   Put a conductive material (sheet) or steel sheet on the area where the optical pickup is placed and ground the sheet.
3. When replacing DVD drive unit
   Because the unit wrapping bag (blue polyethylene bag) may be charged electro-statically, be sure to unwrap the DVD drive unit on the work table when preparing the unit for replacement.
4. Power source
   In the state of drive unit alone, the laser diode may be damaged by the spike current or voltage generated by power on/off of other equipment (electric tolls or fluorescent light stand etc.)
   Provide separate power source for using such equipment.

Handling of Laser Diode

1. Do not use a tester or etc. for checking the laser diode since the laser diode may be damaged easily by the voltage of the tester inside battery.



SETTING ON SHIPPING

Set items	Setting position
Headphone volume	MIN position
Output switch	DVD
Traverse position	Elevation up position (Standby) **Method** At power ON: 1. Close the tray with the CLOSE button. 2. Turn the power off with the POWER button. 3. Disconnect the power plug from the power outlet. **Caution** Do not close the tray in manual after disconnecting the power plug from the power outlet. If do it, the traverse is not set to the elevation up position (standby) and you can not transport the unit.
Initializing of Microcomputer	To initialize the microcomputer (Factory shipping condition), press the OPEN/CLOSE button during pressing both PLAY and SKIP(I◀◀) buttons.

SERVICING INFORMATION

1. Initialization of the DVD Player

Make initialization of the DVD Player when replacing the Main p.w. board, Operation p.w. board and etc.

INITIALIZATION PROCEDURES

During pressing both PLAY and SKIP(⏮) buttons simultaneously on the DVD Player, press the OPEN/CLOSE button on the DVD Player so that the unit is initialized (Factory shipping condition).
The letter of [INITIALIZED] is displayed on the screen.

[Caution]

When the initialization has been made, the contents of user initial setting is lost.
Therefore, before making initialization, previously memorized the contents of user initial setting and set the initial setting again after initialization.

2. After Repair (Transport Method in Repair Service)

After repair, settle the traverse unit at elevation up position.

SETTLING PROCEDURES

1. Turn the power on.
2. Press the OPEN/CLOSE button to close the tray.
3. Turn the power off.
4. Disconnect the power plug from the power outlet.

[Caution]

Do not close the tray manually after disconnect the power plug from the power outlet in tray open condition.
In the case, the traverse is not settled at elevation up position (stand-by) so that you can't transport the unit.

3. In Case of Stopping Operation During Playback

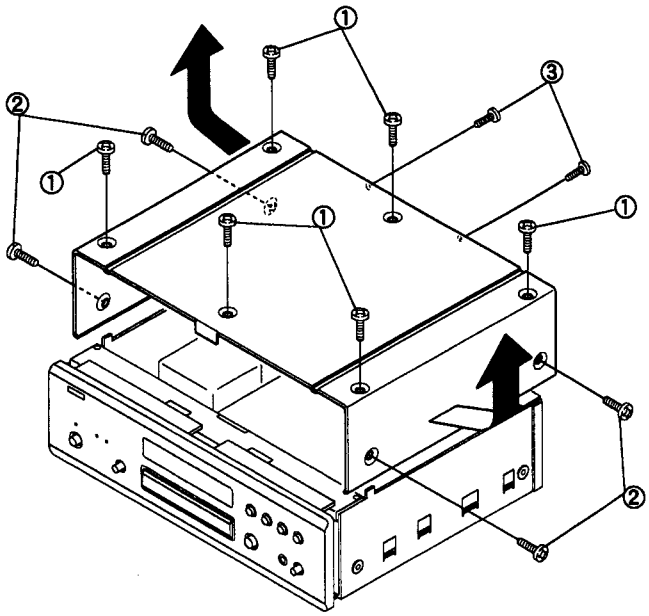
When the unit stop during playback (no operation button operates, etc.), press the [POWER] button. After 5 seconds later the power will be turned off.
When the power is turned on again and the same state appears, the unit may be in trouble. Or, in case stopping operation when the specific disc is used, the cause of trouble may be in the disc itself.

DISASSEMBLY

(Follow in the reverse order for reassembly)

1. Removing the Top Cover

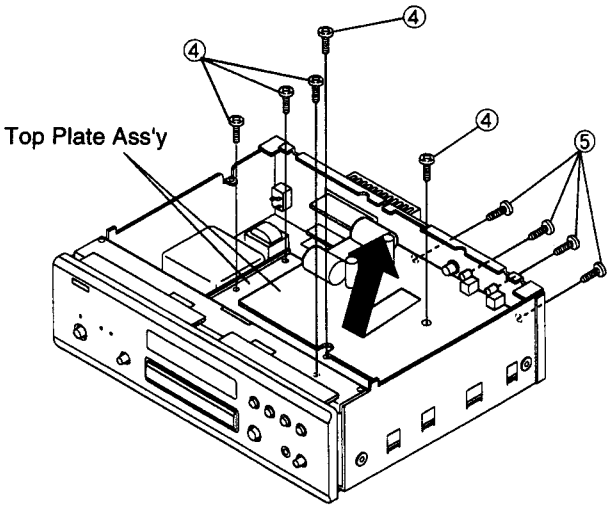
(1) Remove the 6 screws ① on the top, 4 screws ② on both side and the 2 screws ③ on the rear.
(2) Remove the top cover while spreading it slightly and lifting it upward.



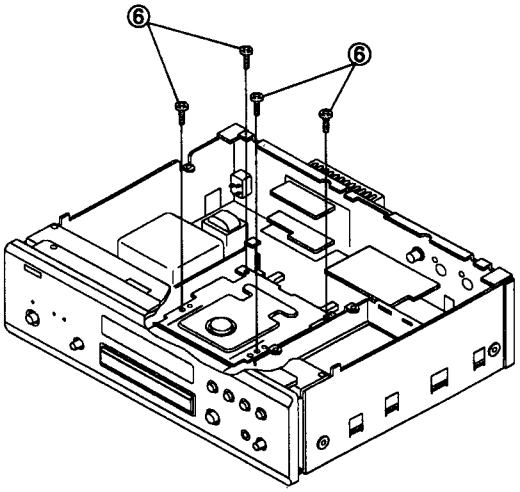
2. How to Remove the Disc on the Tray in Trouble

When the disc does not eject even after pushing the OPEN/ CLOSE button, remove the disc as follows.

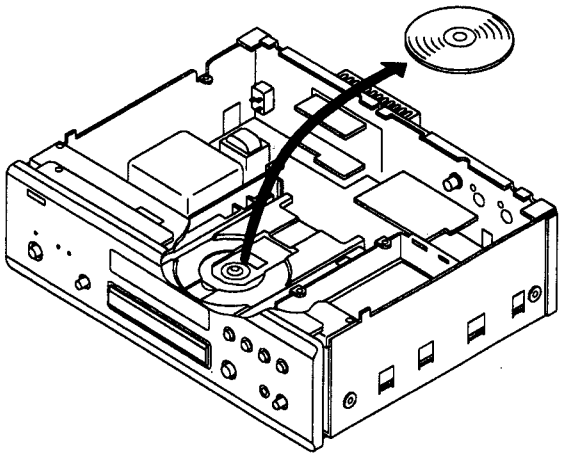
(1) Perform this procedures after the top cover has already been removed.
(2) Remove the 5 screws ④ on the top and the 4 screws ⑤ on the rear side.
(3) Remove the top plate assembly while shifting it to the arrow direction after disconnecting the wire.



(4) Remove the clamp support plate by removing the 4 screws ⑥.

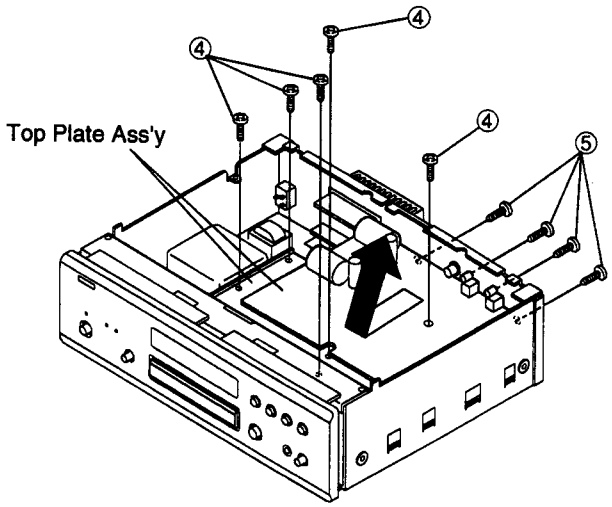


(5) Remove the disc, taking care not to damage it.



3. Removing the Top Plate Assembly

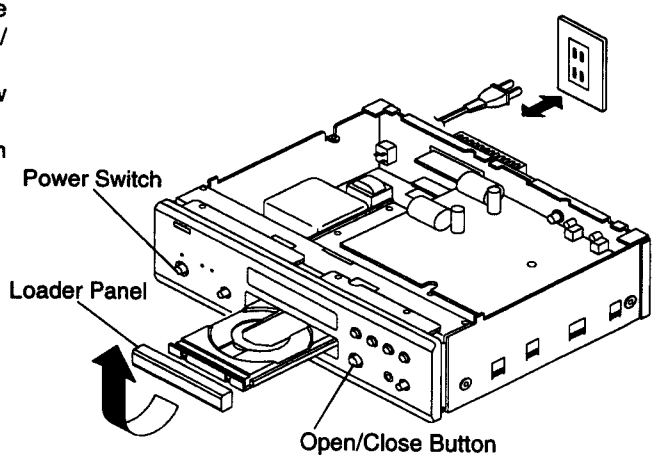
(1) Perform this procedures after the top cover has already been removed.
(2) Remove the 5 screws ④ on the top and the 4 screws ⑤ on the rear side.
(3) Remove the top plate assembly while shifting it to the arrow direction after disconnecting the wire.



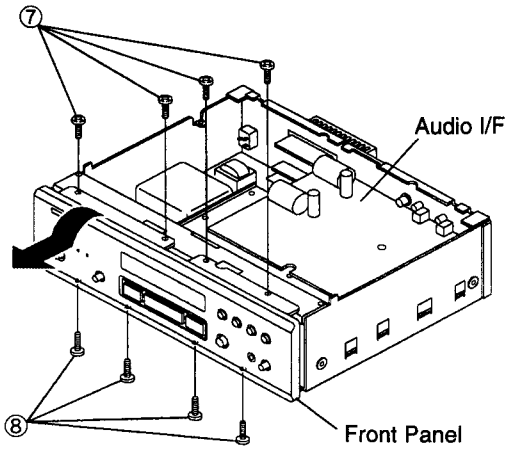
4. Removing the Loader Panel and the Front Panel

4-1. When the disc tray can be opened electrically;

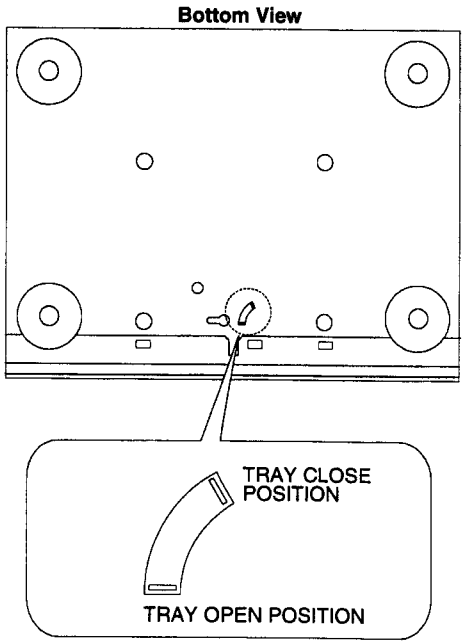
(1) Perform this procedures after the top cover has already been removed.
(2) Open the disc tray by connecting the power plug to the outlet, turning the power switch on and pressing the OPEN/CLOSE button.
(3) Remove the loader panel while lifting it to the arrow direction.
(4) Close the disc tray and disconnect the power plug from the outlet.



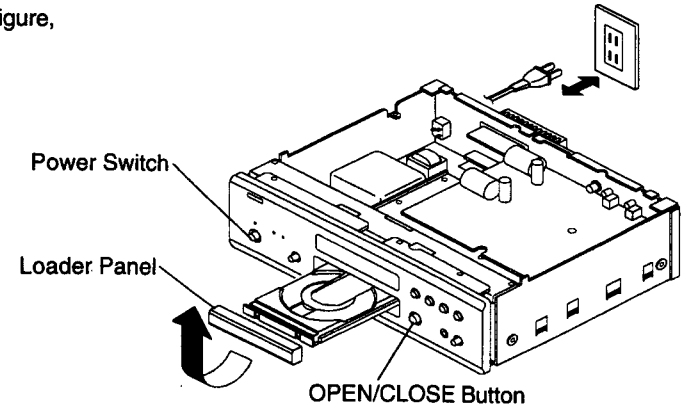
(5) Disconnect the cables connected between the P.W.B. in the front panel and the Audio I/F P.W.B.
(6) Remove the 4 screws ⑦ on the top and the 4 screws ⑧ on the bottom, and remove the front panel to the arrow direction shown in Figure.



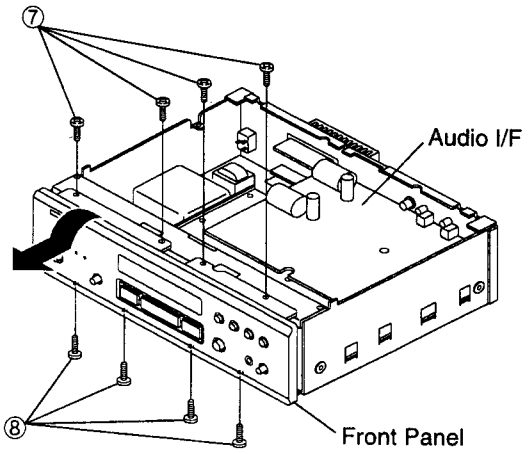
4-2. When the disc tray cannot be opened electrically;
(1) Perform this procedures after the top cover has already been removed.
(2) Catch a part of the rotary cam where can be seen through the hole on the bottom of the main unit using tweezers, and move it until the tray open position.



(3) Lift the loader panel to the arrow direction shown in Figure, and remove it.

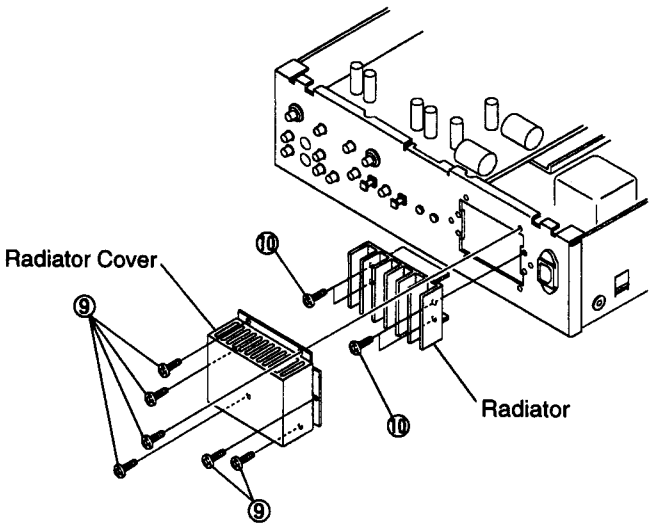


(4) Disconnect the cables connected between the P.W.B. in the front panel and the Audio I/F P.W.B.
(5) Remove the 4 screws ⑦ on the top and the 4 screws ⑧ on the bottom, and remove the front panel to the arrow direction shown in Figure.



5. Removing the Radiator

(1) Remove the 6 screws ⑨, and remove the radiator cover.
(2) Remove the radiator after removing the 4 screws ⑩.



2. Disassembling and Reassembling the Loading Base

Please take proper care to prevent static electricity damage when touching the loading base.
We recommend that you remove the entire loading base Unit before replacing the laser pick-up.

2-1. Removal of the Loading Base

1. Follow the "Top Cover," "Tray Panel" and "Front Panel" when removing the casing parts.

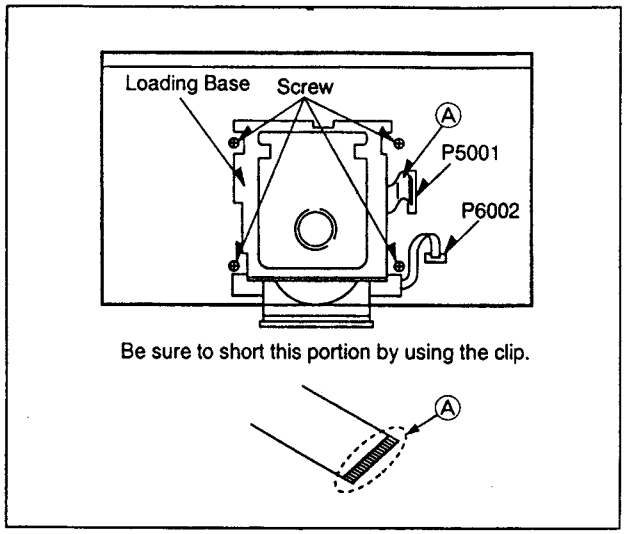


Fig. 2-1 Removal of the Loading Base

2. Remove the 2 Flexible Cables connecting the loading base and the main P.W.B. (Circuit Board Assembly)
   Static electricity destroys the laser diode. After removing the flexible cable Ⓐ, short the flexible cable Ⓐ with a metal clip.
3. Remove the 4 screws attaching the Loading Base.

2-2. Disassembling the Clamp Support Plate and the Clamper

1. Remove the Clamp Support Plate from the Loading Base by removing the 4 screws.

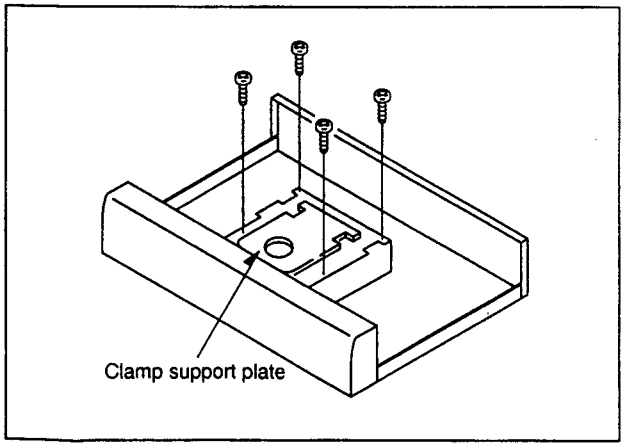


Fig. 2-2-1. Removal of the Clamp Support Plate

2. Remove the 4 screws.
3. Disassemble while unlocking the three tabs on the bottom of the clamper. Be careful not to damage these tabs.

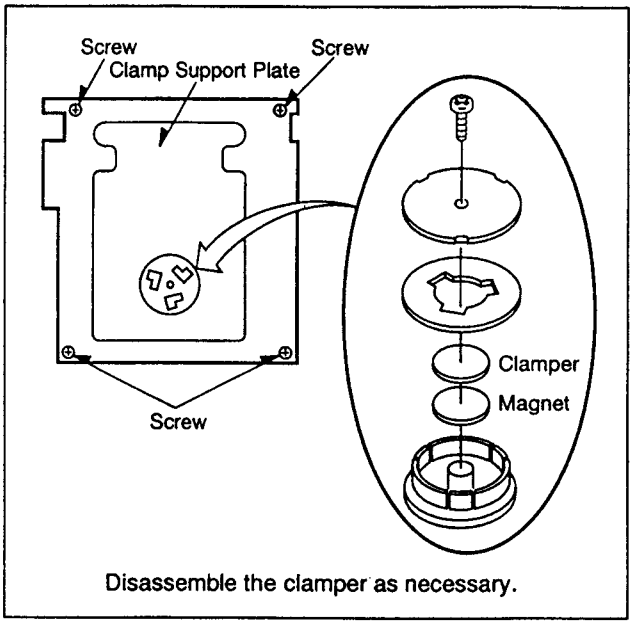


Fig. 2-2-2 Disassembly of the Clamper

2-3. Removing the Loading Tray

1. Move the portion of the Rotary Cam extending from the bottom of the loading base to the "Tray Open" position.

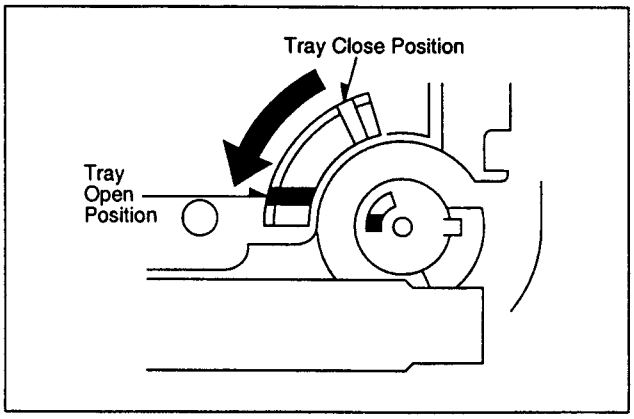


Fig. 2-3-1 Tray Open Position of the Rotary Cam

2. The tray can be manually moved to the open position.

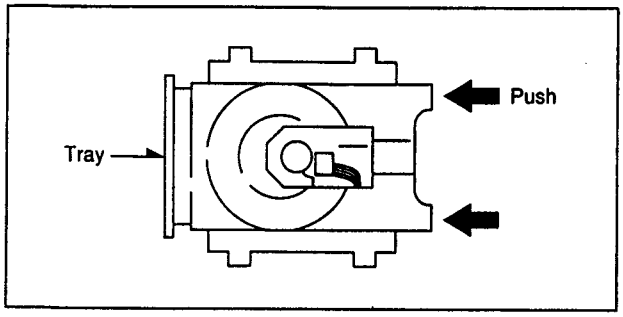


Fig. 2-3-2 Manual Movement of the Tray

3. The left and right catchers are locked so that the tray will not slip out. Therefore remove the tray while spreading these catchers outward.

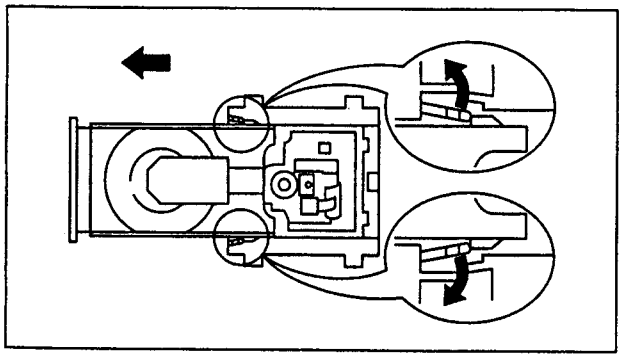


Fig. 2-3-3 Removal of the Tray

2-4. Removing the Traverse Unit

1. Remove the 2 screws setting the Rotary Support Plate Spring. Then remove the 2 screws fixing the Chassis Stoppers and the Springs (two each).

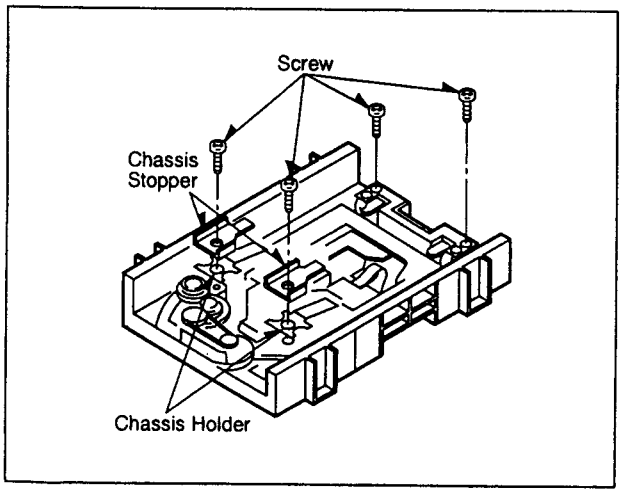


Fig. 2-4-1 Removal of the Traverse Unit

2. The Traverse Unit is connected to the Rotary Cam, slowly lift the back side (the side of Rotary Support Plate Springs) and remove.

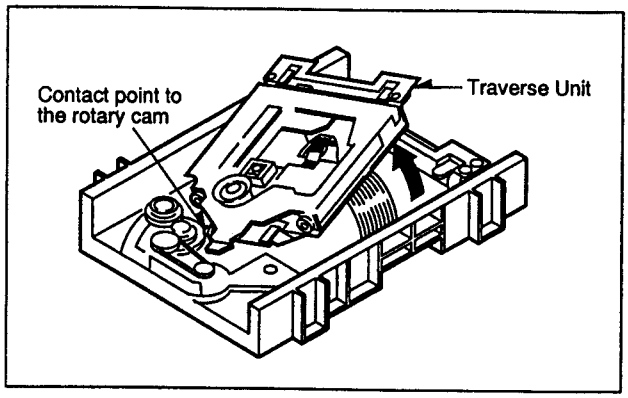


Fig. 2-4-2 Contact Point of the Traverse Unit and the Rotary Cam

2-5. Removing the Loading Section Parts

These parts can be removed even without taking out the Traverse Unit. Each gear and belt can be removed as shown in the figure below.

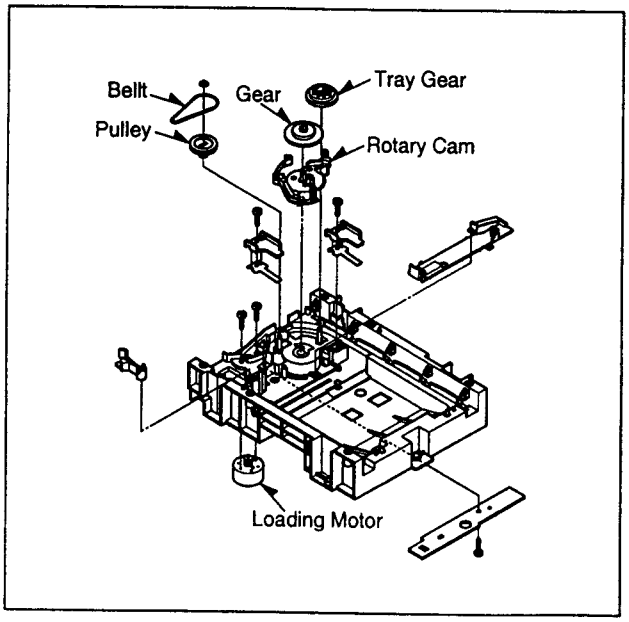


Fig. 2-5 Removal of the Loading Mechanism

2-6. Assembling the Loading Section Parts

Although the phases do not need to be aligned during assembly, please follow the order for assembly.

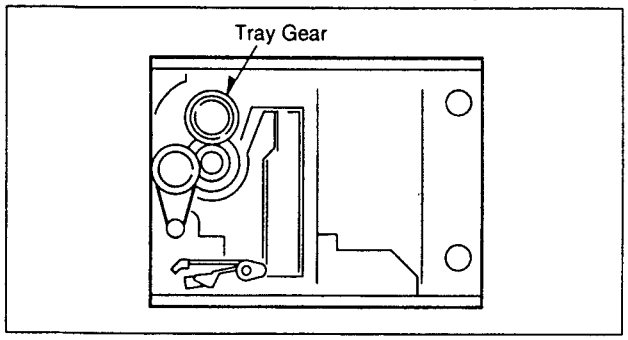


Fig. 2-6 Assembly of the Loading Mechanism

2-7. Assembling the Traverse Unit

1. Pull the Flexible Cable, which sticks out from the Traverse Unit, out from the inner side of the Loading Base.

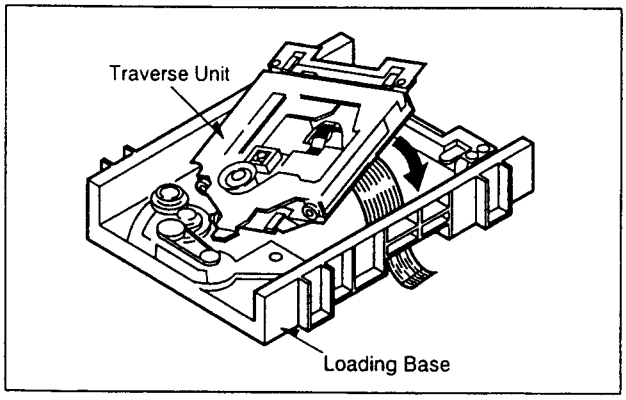


Fig. 2-7-1 Assembly of the Traverse Unit

2. Rotate the Tray Gear counterclockwise, then insert the end of the Traverse Unit into the groove in the Rotary Cam, and tighten the 4 screws.

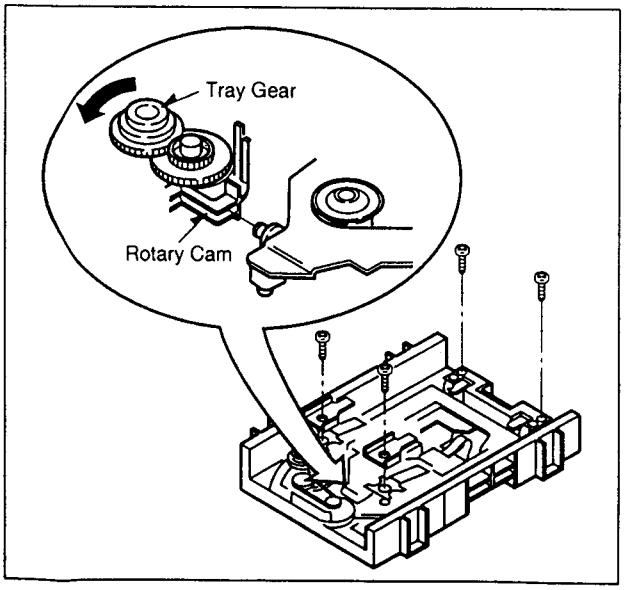


Fig. 2-7-2 Setting of the Traverse Unit and the Rotary Cam

2-8. Attaching the Loading Tray

1. Rotate the Tray Gear counterclockwise and verify that the Traverse Unit is at the lowest position.
2. Push the portion Ⓐ of Rotary Cam in the direction of arrow.
3. Confirm that the Pawl of Rotary Cam is locked.

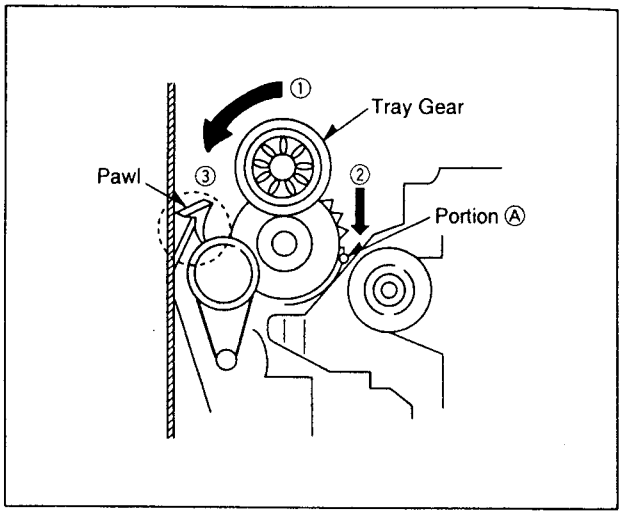


Fig. 2-8-1 Setting of the Tray

2. There is no phase alignment when inserting the tray. Insert the tray straight into the Loading Base.

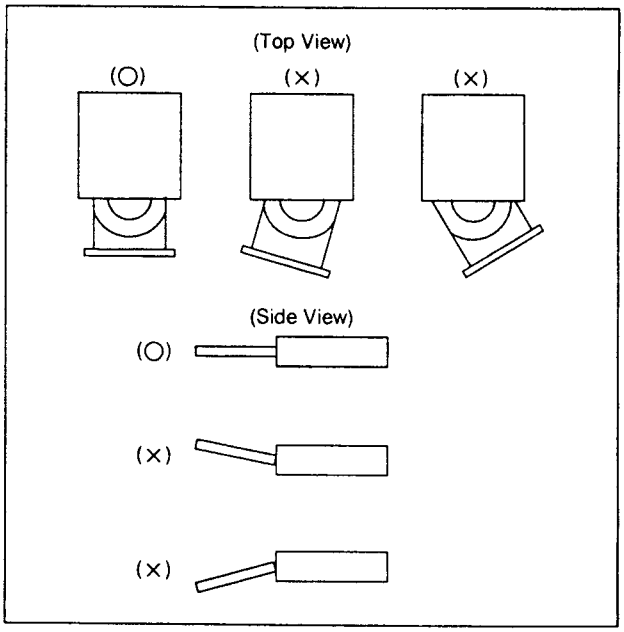


Fig. 2-8-2 Normal Setting of the Tray

2-9. Attaching the Clamp Support Plate

1. Attach the Clamp Support Plate and assemble the Loading Base.

3. Replacing the Main Parts of the Traverse Unit

This section describes the replacement of the main parts in the Traverse Unit, including the Laser Pick-Up, the Disc Motor, the Traverse Motor Unit.
Work should be performed after removing the Traverse Unit.

To Prevent Damage to the Laser Diode
Static electricity destroys the Laser Diode. Always take countermeasures to prevent static electricity damage when performing repairs around the Laser Pick-Up.

1. **Do not touch the area around the Laser Pick-Up or the Actuator.**
2. **Do not check the Laser Diode with a tester or other device (the Laser Diode can be broken quite easily).**
3. **Short-Circuit the Laser Pick-Up**
   Solder the Land in the center of the flexible cable of the Laser Pick-Up. This will short-circuit the Laser Diode and help prevent damage from static electricity.

Caution:
Do not forget to remove the soldered Laser Diode short-circuit after finishing repair, and leave the circuit open.

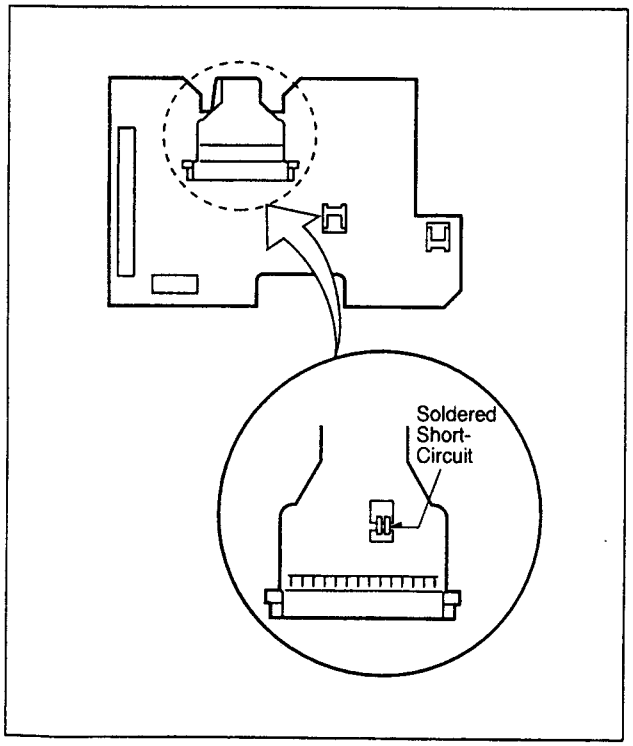


Fig. 3-A Short Circuit of the Laser Diode

Preparation Prior to Replacing the Parts
Always perform this work after taking action to prevent damage to the Laser Diode, regardless of whether or not the Laser Pick-Up is in working order.

1. Remove 2 connectors and 3 flexible cables on the Relay Board. FP0001–FP0003, FP0004 and FP0005.

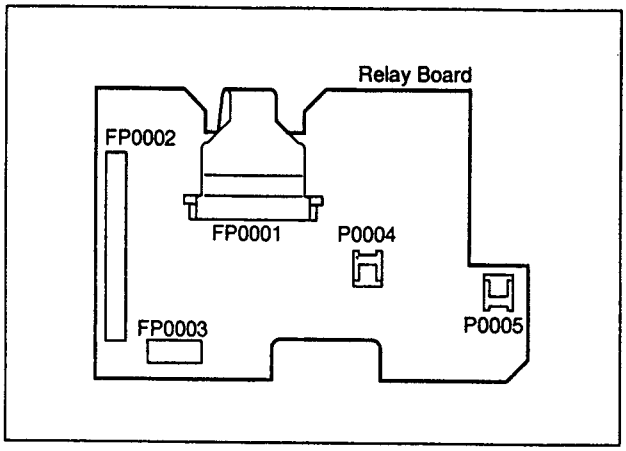


Fig. 3-B Relay Board

2. Remove the 3 screws, so that, traverse Unit can be separated into two sections.

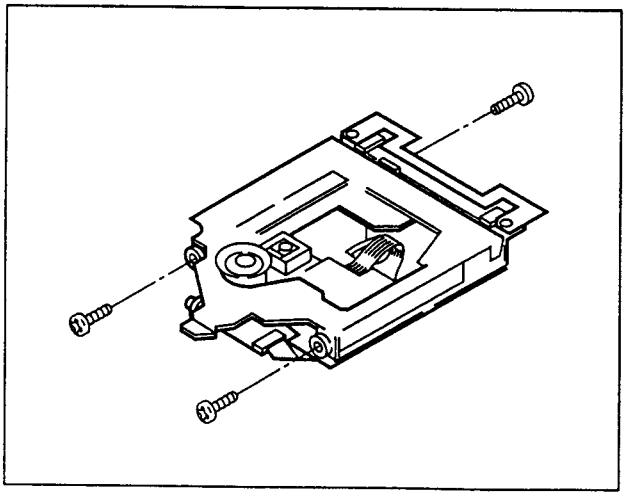


Fig. 3-C Disassembly of the Traverse Unit

3-1. Replacing the Laser Pick-Up

1. Remove the 2 screws.
2. Remove the Laser Pick-Up.

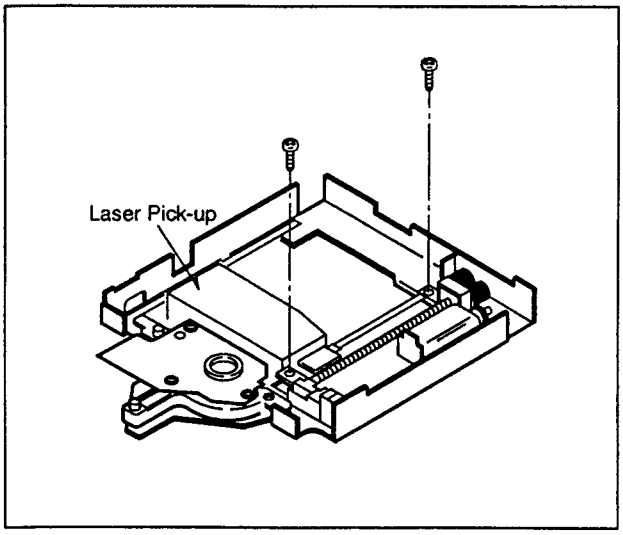


Fig. 3-1 Replacement of the Laser Pick-up

3-2. Replacing the Traverse Motor Unit

1. After the Laser Pick-Up has been removed, remove the 2 screws.
2. Remove the Traverse Motor Unit.

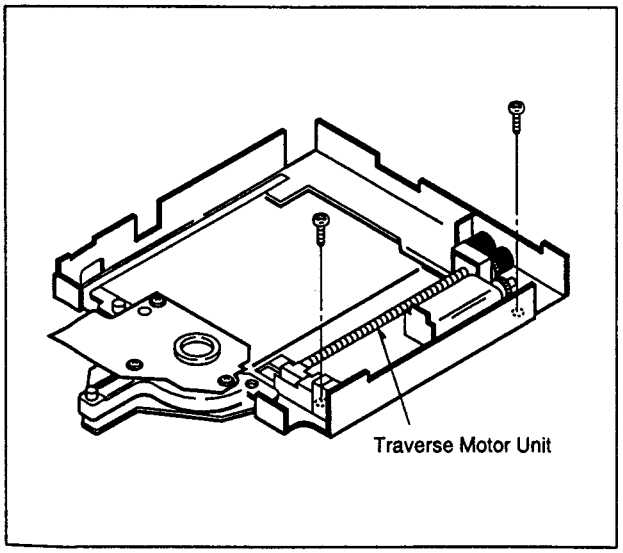


Fig. 3-2 Replacement of the Traverse Motor Unit

3-3. Replacing the Disc Motor

1. This disc motor can be removed after the Traverse Unit has been separated into two sections.
2. Remove the 2 screws A.
3. Remove the 2 screws B using an Hex. wrench.

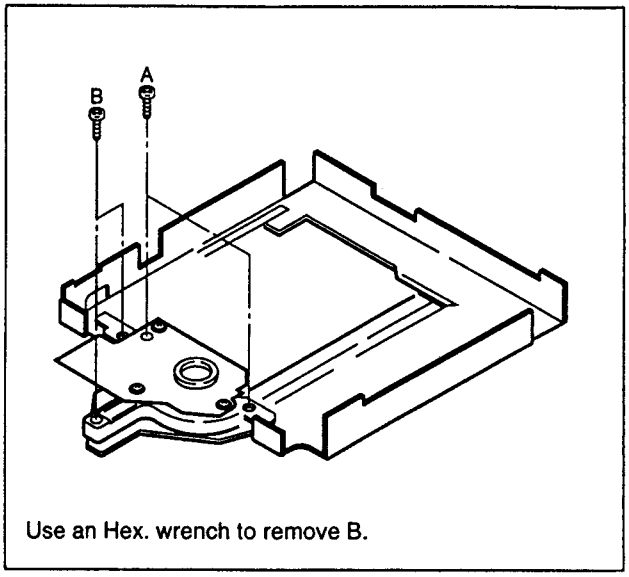


Fig. 3-3 Replacement of the Disc Motor

Note: It is not necessary to remove the Laser Pick-Up for replacement of the Disc Motor.

3-4. Disc Motor Assembly/Tentative Tilt Adjustment

1. For the Disc Motor assembling, install the 2 Screw B (adjustment screw) after firmly tightening the 2 Screws A. (Refer to the figure 3-3.)
2. Use the 2 Screws B to temporarily set the Disc Motor so that it rests parallel to the Base.

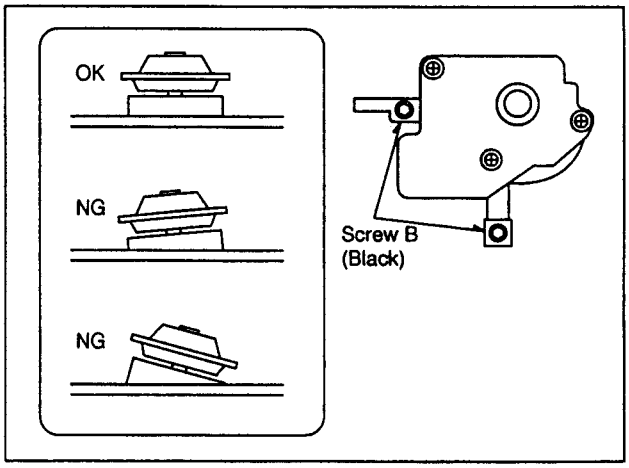


Fig. 3-4 Disc Motor Assembling

3. For final adjustment, proceed the Tilt Adjustment of Disc Motor (Page 2-12).

3-5. Others

1. Reassemble the Laser Pick-Up and the Traverse Motor Unit in precisely the reverse order as they were disassembled.
2. After reassemble the Laser Pick-up and the Traverse Motor Unit, perform the Tilt Adjustment of Disc Motor (Page 2-12).

Adjustment Procedures

Equipment Necessary for Adujustment

1. Measuring Equipments
   General measuring equipments including an oscilloscope.
2. DVD Test Disc
   Part No. DVDT-S01 (Single Layer)
3. Video-CD/CD-DA Test Disc
   Part No. PVCD_K06
4. Others
   Conventional Tools, Hex. wrench (1.5 mm), and etc.

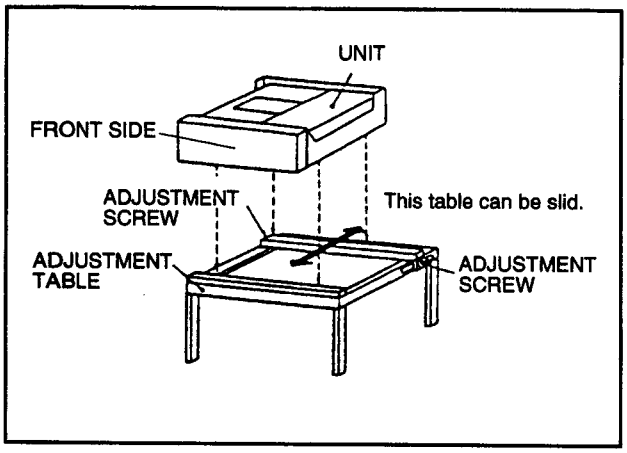


Fig. Adjustment Table

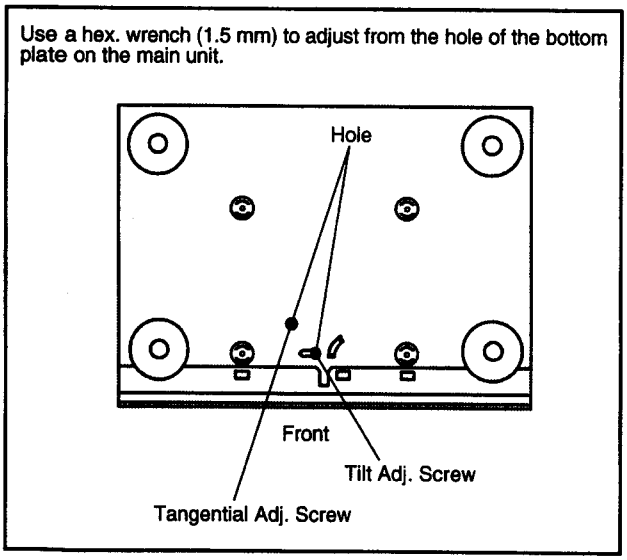

Use a hex. wrench (1.5 mm) to adjust from the hole of the bottom plate on the main unit.
Hole
Front
Tilt Adj. Screw
Tangential Adj. Screw

Fig. Location of Slant Adjustment Screws

Adjustment Points

Optical Adjustment

- Take countermeasures to prevent damage from static electricity before proceeding the optical adjustment.
- When replacing the following parts, optical adjustment [slant adjustment for the disc motor] will be required.

1. The disc motor.
2. The laser pick-up.
3. The Traverse motor unit.
4. The parts around the laser pick-up (rail, etc.).

Remarks:

Though basically adjustment is not necessary for other parts in the traverse, perform adjustment if the picture quality becomes poor. Optical adjustment inside the laser pickup is not possible. Perform slant adjustment of the disc motor after replacing the optical pickup unit.

- Basically adjustment is not necessary after replacing the traverse unit.

Electrical Adjustment

- Perform adjustment according to adjustment procedures.

Safekeeping & Management for the Test Disc

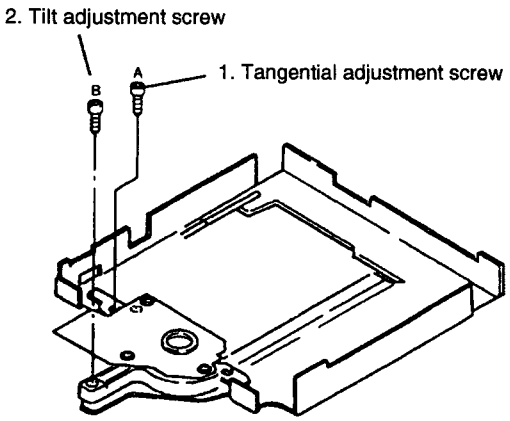
- The flat surface accuracy is required for the DVD Test disc. Pay attention to safekeeping and management for the test tapes.

1. Do not put the test disc directly on your work desk etc. after using.
2. Handle it carefully to keep flat surface, and keep it vertical putting in it's case after using. Also, keep it in normal temperature and do not expose the direct sun and direct wind of the air conditioner.
3. If the test disc is warped, adjustment can not be performed properly. You can check it by putting it on a flat glass surface if it is warped. Perform optical adjustment using a new test disc.
4. If adjustment is performed using a warped test disc, some disc may be not able to play-backed properly.

OPTICAL ADJUSTMENT

[Slant Adjustment for the Disc Motor]

Measurement Point	Adjustment Point	Mode	Test Disc
TL5206 GND: Chassis	Tilt adjustment screw	Play title 8, Pause	DVDT-S01
Measuring Equipment		Adjustment Value	
Oscilloscope DC 500mV/div., 20 msec./div.		Adjust until the bottom section of the waveform becomes flat and the DC components are minimum.	



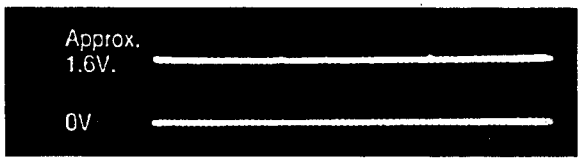
Slant adjustment of the disc motor is performed by the 2 screws of the tangential adjustment screw and the tilt adjustment screw, and it is adjusted from the bottom plate of the main unit.

1. Play back the DVD test disc and then place the unit in play mode with title 8, then push the Pause button.
2. Adjust the tangential adjustment screw and the tilt adjustment screw alternately so that the waveform of TL5206 becomes as shown in Figure below.

Points

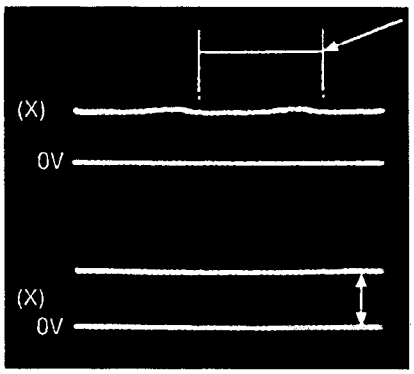
1. Perform tilt adjustment after doing tangential adjustment.
2. Repeat this process alternately 2 to 3 times to find the best point.
3. Final adjustment should be tilt adjustment.

TL5206 Correct Adjustment



In final, adjust the image so that the total DC level becomes minimum (less than 1.6V in target).

During Adjustment



The valley section of the waveform should be as flat as possible.

The waveform whisker section will not disappear.

Adjust it so that the total DC level becomes minimum.

Check the following after Adjusting

Check Video CD and CD-DA by playing-back if there is no abnormal operation, after adjustment.

Electrical Adjustment Produres

The following adjustment is electrical adjustments. These adjustments are to be performed after replacing the printed circuit boards.

Video Output (Luminance Signal) Adjustment

Measurement Point	Adjustment Point	Mode	Disc
Video Output Pin Terminal GND: Chassis	VR3232	Playback Title 12 (Color Bar)	DVDT-S01
Measuring Device		Adjustment Value	
Oscilloscope 500 mV/div, 10 µs/div		1000 ± 20 mV p-p	

For compatibility of video signal output.

1. Connect the monitor TV to the video output terminal and terminate at 75 Ohms.
2. Play back the color bar part Title 12 of the DVD Test Disc title.
3. Adjust the VR3232 so that the luminance signal output is as shown below.
4. Confirm the signal on the video board side.

Adjustment Value = 1000 ± 20 mV p-p

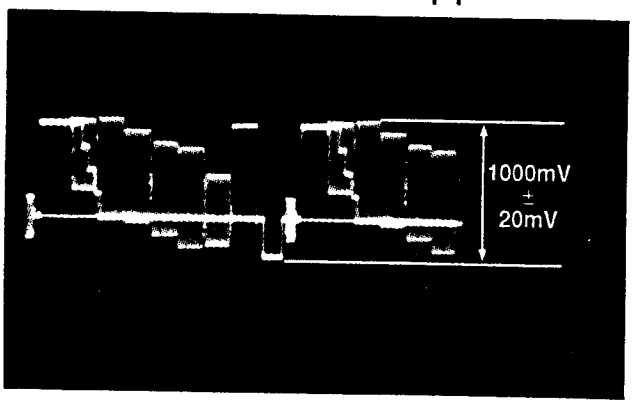


Fig. 6-2-1 Luminance Signal Output

Video Output (Chrominance Signal) Adjustment

Measurement Point	Adjustment Point	Mode	Disc
Video Output Pin Terminal GND: Chassis	VR3233	Playback Title 12 (Color Bar)	DVDT-S01
Measuring Device		Adjustment Value	
Oscilloscope 500 mV/div, 10 µs/div		671 ± 13 mV p-p	

For compatibility of video signal output.

1. Connect the monitor TV to the video output terminal and terminate at 75 Ohms.
2. Play back the color bar part Title 12 of the DVD Test Disc title.
3. Adjust the VR3233 so that the chrominance (CYAN) signal output is as shown below.
4. Confirm the signal on the video board side.

Adjustment Value = 671 ± 13 mV p-p

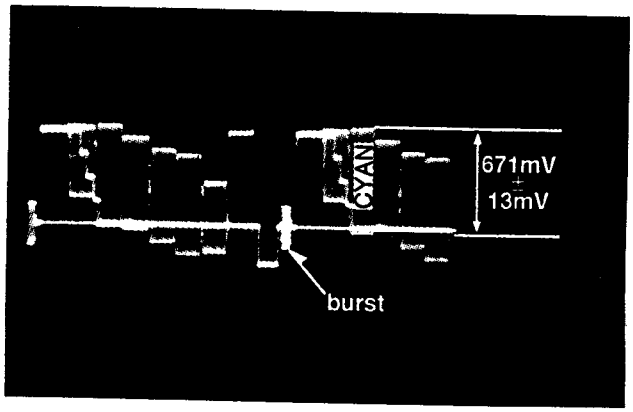
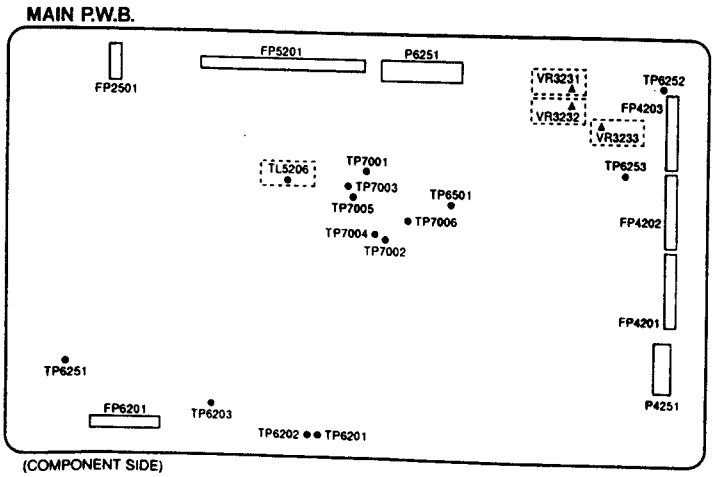


Fig. 6-2-2 Chrominance Signal Output

Test Points & Controls Location



Video Output (PB Signal) Adjustment

Measurement Point	Adjustment Point	Mode	Disc
Y Output Pin terminal PB Output Pin terminal	VR3231	Playback Title 12 (Color Bar)	DVDT-SOI
Measuring Device		Adjustment Value	
Oscilloscope 200 mV/div, 10 µs/div		486±11mVp-p U.S.A./Canada models 525±11mVp-p Europe/Asia/Taiwan R.O.C. models	

NOTE: Y Output and PB Output should be 75 Ω terminate.

For compatibility of video signal output.

1. Connect the monitor TV to the video output terminal and terminate at 75 Ohms.
2. Connect the oscilloscope to PB output Pin terminal for CH-1 and Y output Pin terminal for CH-2. (Trigger)
3. Playback the color bar part title 12 of the DVD Test Disc title.
4. Adjust the VR3231 so that the PB signal output is as shown below.
5. Confirm the signal on the video board side.

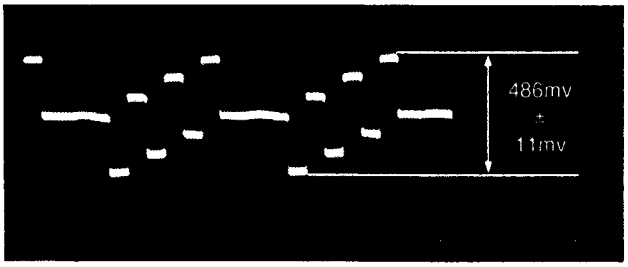


Fig. 6-2-3 PB Signal Output
U. S. A./Canada models

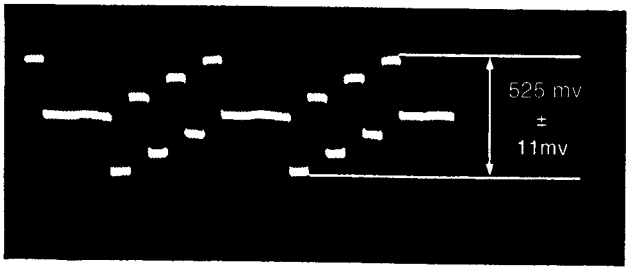


Fig. 6-2-3 PB Signal Output
Europe/Asia/Taiwan R. O. C. models

Fc Correction

NOTE: This adjustment should be performd only when the FEP IC (IC25201) has been replaced.

Measurement Point	Adjustment Point	Mode	Test Disc (Input Signal)
TC5236 TC5235 TC2006	———	———	———
Measuring Equipment		Adjustment Value	
DC POWER SUPPLY Oscilloscope 200 mV/div, 50 ns/div, AC coupling		REFER TO FIG. 6-2-4B	

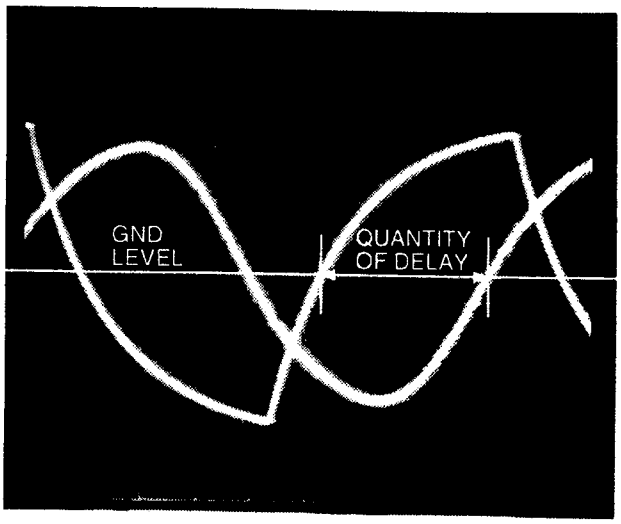


Fig. 6-2-4A

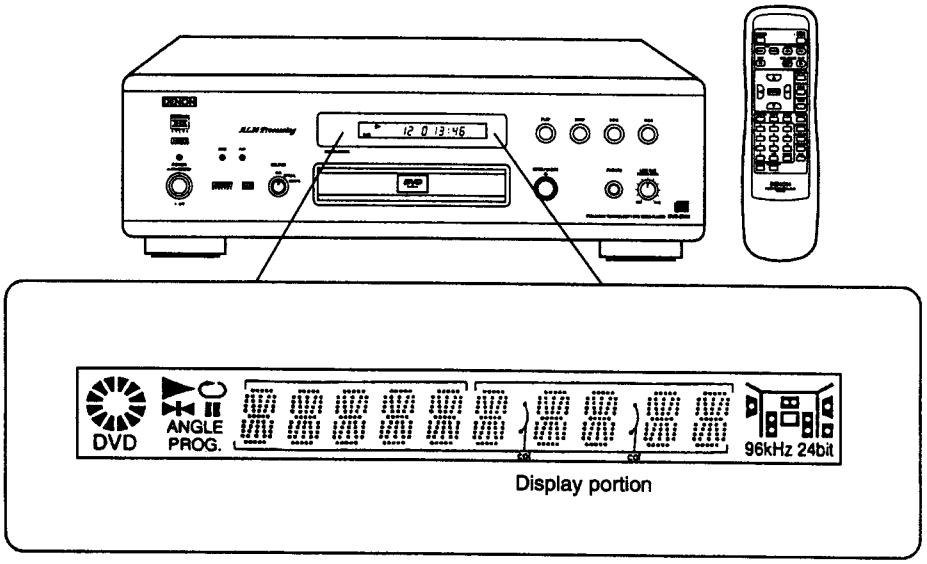
1. During pressing both [PLAY] and [OPEN/CLOSE] buttons of the DVD Player, push [CLEAR] button of the Remote Controller.
2. Connect the oscilloscope to TC5236 for CH-1 and TC5235 for CH-2 (Trigger).
3. According to a quantity of delay, supply TC2006 with DC Voltage by the DC Power Supply as shown in Fig. 6-2-4B.
4. The letter of [FEP_ * *] is displayed on the FL display.
5. Confirm whether shown in Fig. 6-2-4B agrees with letter of [FEP_ * *].
6. Push [STOP] botton of the DVD Players. (Write in E2PROM)

Quantity of delay	TC2006 SUPPLY Voltage	FL Display
~ 325 ns	1.2 V	FEP_10
325 ~ 355 ns	1.7 V	FEP_11
355 ~ 385 ns	2.1 V	FEP_12
385 ~ 415 ns	2.6 V	FEP_13
415 ~ ns	3.1 V	FEP_14

Fig. 6-2-4B

SELF-DIAGNOSIS FUNCTION

This unit has a built-in service mode which is useful for diagnosis of trouble.



Display portion

1. U.H.F. display

Display method	Display		Diagnosis Contents	Check Point
Display items when using	U	11	Focus Error	IC2001, IC2511, IC5201, Pick-up
Display automatically	H	01	Tray Loading Error	IC2001, IC2511, Loading motor
		02	Spindle Servo Error	Disc motor, IC2501, IC2001
		03	Traverse Error	Traverse motor, IC2511, IC2001
		04	Tracking Servo Error	IC2001, IC2501, IC5201, Pick-up, Disc
		05	Seek Error	Traverse motor, IC2511, IC2001
Press [0] on the remote control while pressing [Play] and [OPEN/CLOSE] An error code which occurs latest is stored in EEPROM.	F	0**	Disc Format Error	Disc
		1**	Disc Code Error	Disc
		2**	Decoder LSI Error	IC3001, IC3201
		3**	SDRAM Error	IC3051, IC6301, IC7051
		4**	IIC BUS Error	IC2001, IC3201, IC4201, IC5201, IC6201, IC6312, IC7001
		5**	DSC Error	IC2001
		6**	ECC Error	IC7001
		7**	Microcomputer Error	IC6001, IC6201
		8**	Microcomputer Error	IC6001, IC6201

2. Display Check Function

Setting Method

All segments of the display appear by pressing [9] on the remote control while pressing both [Play] and [OPEN/CLOSE] buttons on the main unit. To cancel it, press [POWER] button.

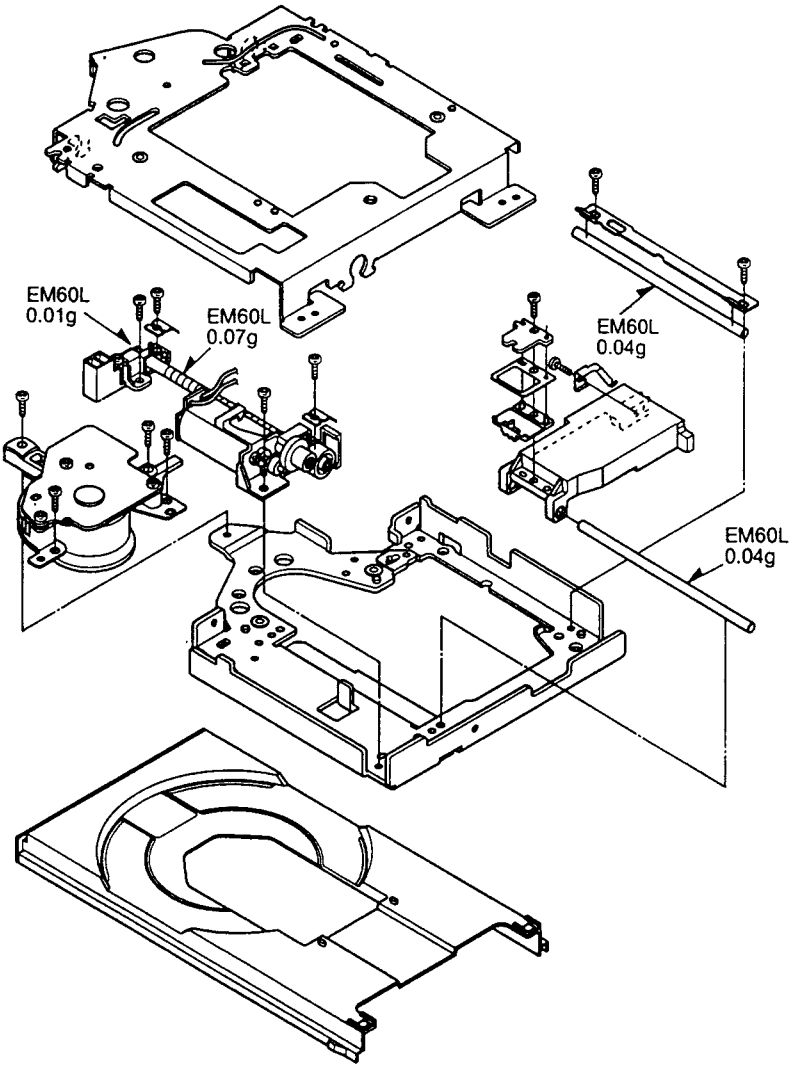
3. Lock Function

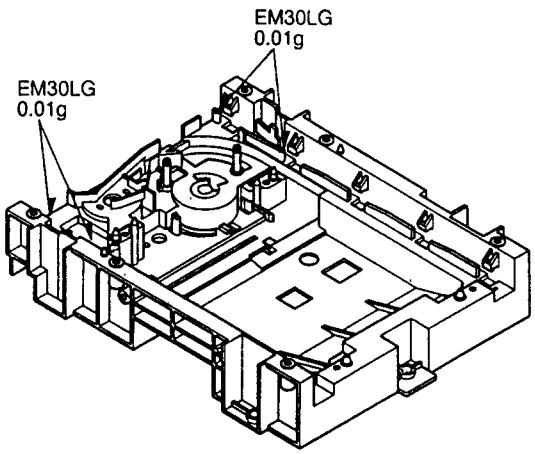
This function is for preventing the disc from pilferage in a store etc., and [Eject] and [Power OFF] function becomes invalid.

Setting Method

This function is set by pressing the [POWER] on the remote control while pressing [STOP] button on the main unit. To cancel it, perform the same procedure again.

Lubrication Information For The DVD Mechanism Unit

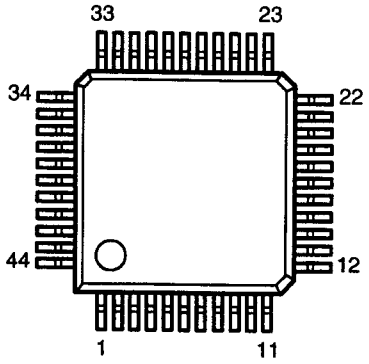




SEMICONDUCTORS

● IC's

DXP6001AF
(IC101)



● DXP6001AF Terminal Function

Pin No.	Pin Name	I/O	Descrption
1	MDT	Ip	Microcomputer Interface Data
2	MCK	Ip	Microcomputer Interface Clock
3	MLEN	Ip	Microcomputer Interface Latch Enable
4	RSTN	Ip	Reset Terminal
5	DLRCK	Ip	Audio Serial Input Data L/R Clock
6	VSS	–	Ground Terminal
7	DBCK	Ip	Audio Serial Input Bit Clock
8	DDT	Ip	Audio Serial Input Data
9	TEST2N	Ip	Test Setting Terminal 2 (Alpha-processor 1 Output shifts 12-bit.)
10	TEST3N	Ip	Test Setting Terminal 3 (Alpha-processor 2 Output stops.)
11	TEST4N	Ip	Test Setting Terminal 4 (Lambda-processor Output stops.)
12	DFBCK	Ip	Lambda-processor Input Bit Clock
13	DFWCK	Ip	Lambda-processor Input Word Clock
14	DOL	Ip	Lambda-processor Input Data L-channel
15	DOR	Ip	Lambda-processor Input Data R-channel
16	LMOD	Ip	Lambda-processor Operation Mode Set
17	OMOD1	Ip	Output Mode Setting Terminal 1
18	OMOD2	Ip	Output Mode Setting Terminal 2 OMOD2 / OMOD1 L: L = 18bit Alternate, H = 24bit Alternate OMOD2 H: L = 20bit Parallel, H = 24bit Parallel
19	INVIN	Ip	Lambda-processor Input Reversed Polarity Terminal
20	BCKO	O	Lambda-processor Output Bit Clock
21	WCKO	O	Lambda-processor Output Word Clock
22	WCKO2	O	Lambda-processor Output Word Clock 2 (for Canceling OFFSET on 1DAC

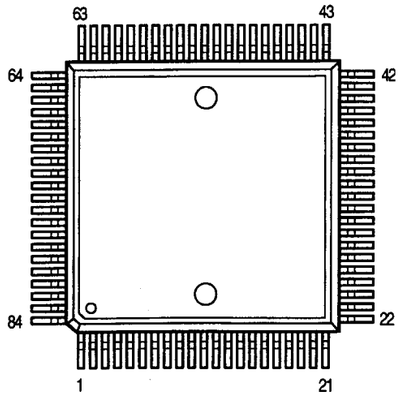
Pin No.	Pin Name	I/O	Descrption
23	–P24L	O	–/Lambda-processor Lch 24th bit Output *1, *2
24	–P23L	O	–/Lambda-processor Lch 23rd bit Output *1, *2
25	–P22L	O	–/Lambda-processor Lch 22nd bit Output *1, *2
26	–P21L	O	–/Lambda-processor Lch 21st bit Output *1
27	–P20L	O	–/Lambda-processor Lch 20th bit Output *1
28	VDD	–	Power Supply Terminal
29	SO2L/P19L	O	Lambda-processor Lch(–) Output /19th bit Output *1
30	SO1L	O	Lambda-processor Lch(+) Output
31	SO1R	O	Lambda-processor Rch(+) Output
32	SO2R/P19R	O	Lambda-processor Rch(–) Output/19th bit Output *1
33	–P20R	O	–/Lambda-processor Rch 20th bit Output *1
34	–P21R	O	–/Lambda-processor Rch 21st bit Output *1, *2
35	–P22R	O	–/Lambda-processor Rch 22nd bit Output *1, *2
36	–P23R	O	–/Lambda-processor Rch 23rd bit Output *1, *2
37	–P24R	O	–/Lambda-processor Rch 24th bit Output *1, *2
38	TEST1N	Ip	Test Terminal 1 (Alpha-processor 1 stops)
39	CKSLN	Ip	System Clock Select (384fs system / 256fs system)
40	CKDV1	Ip	System Clock Divider Select Terminal 1
41	CKDV2	Ip	System Clock Divider Select Terminal 2 CKDV2 / CKDV1 L: 192fs (CKSLN=H) / 256fs (CKSLN=H) = 768fs CKDV2 / CKDV1 H: 192fs (CKSLN=H) / 256fs (CKSLN=H) = 384fs
42	XTI	I	X-TAL Oscillator Input Terminal
43	XTO	O	X-TAL Oscillator Output Terminal
44	CKO	O	Clock Output Terminal

(Ip = Input Terminal with pull-up)

*1: Outputted on OMOD1=L (18-bit Alternate Output or 20 bit Parallel Output)

*2: Internal Signal is outputted on OMOD1=H (24-bit Alternate Output or 24 bit Parallel Output) and one of TEST1N, TEST2N, TEST3N or TEST4N is set to L.

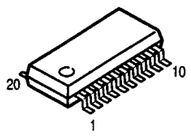
MN1872423*
(IC601)



● **MN1872423*** Terminal Function**

Pin No.	Pin Name	Symbol	I/O	Description
1	P21(ADIN0)	PowerOff	O	ON/OFF LED of Main Power Supply
2	P20(ADIN1)	SEL	O	Channel Status / Sampling Frequency, Error Select
3	VREFH	VREFH	I	5V
4	VDD	VDD	I	5V
5	OSC2	XI	I	Clock Input
6	OSC1	XO	O	Clock Output
7	VSS	VSS	I	GND
8	XI		I	Open
9	XO		I	Open
10	CM	GND	I	GND
11	P93	Cd/F1	I	SEL=H : but it is in reverse on CD and Satellite Broadcasting SEL=L : Sampling Frequency
12	P92(SBI2)	Cc/F0	I	SEL=H : L = Emphasis OFF, H = Emphasis ON SEL=L : Sampling Frequency
13	P91(SBO2)	Ce/F2	I	SEL=H : Unknown Category SEL=L : Sampling Frequency
14	P90(BUZZER)	Ca/E1	I	SEL=H : L = Audio, H = No Audio SEL=L : Kind of Error
15	VPP	?29V	I	Voltage for Pull-down
16	P67(SEG15)			Open
17	P66(SEG14)	P1	O	Digit 1
18	P65(SEG13)	P2	O	Digit 2
19	P64(SEG12)	P3	O	Digit 3
20	P63(SEG11)	P4	O	Digit 4
21	P62(SEG10)	P5	O	Digit 5
22	P61(SEG9)	P6	O	Digit 6
23	P60(SEG8)	P7	O	Digit 7
24	P57(SEG7)	P8	O	Digit 8
25	P56(SEG6)	P9	O	Digit 9
26	P55(SEG5)	P10	O	Digit 10
27	P54(SEG4)	P11	O	Digit 11
28	P53(SEG3)	P12	O	Digit 12
29	P52(SEG2)	P13	O	Digit 13
30	P51(SEG1)	P14	O	Digit 14
31	P50(SEG0)	P15	O	Digit 15
32	P77(DGT0)	G1	O	Segment 1
33	P76(DGT1)	G2	O	Segment 2
34	P75(DGT2)	G3	O	Segment 3
35	P74(DGT3)	G4	O	Segment 4
36	P73(DGT4)	G5	O	Segment 5
37	P72(DGT5)	G6	O	Segment 6
38	P71(DGT6)	G7	O	Segment 7
39	P70(DGT7)	G8	O	Segment 8
40	P87(DGT8)	G9	O	Segment 9
41	P86(DGT9)	G10	O	Segment 10
42	P85(DGT10)	G11	O	Segment 11
43	P84(DGT11)	G12	O	Segment 12
44	P83(DGT12)	G13	O	Segment 13
45	P82(DGT13)	SEL1	O	Digital Output Switching Signal
46	P81(DGT14)	SEL2	O	Digital Input OPT / COAX Switching Signal
47	P80(DGT15)	SEL3	O	Digital Input / Internal Digital Output Switching Signal
48	SYNC			Open
49	P17(PWM2)	SEL4	O	DIR / AVDEC Switching Signal
50	P16(PWM1)	SEL5	O	D.F.I Control Switching Signal
51	P15(RMOUT)	MO-2	O	L=16-bit fixed, H=16-24 bit
52	P14(TCO35)	AMUTE	O	Analog Mute
53	P13(TCIO4)	DO.M	O	Digital Mute
54	P12(TCI3)	TEST2N	O	Test Terminal 2 (Used for Demonstration)
55	P11(TCO1)	POWERMUT	O	
56	P10(TCIO1)	TEST1N	O	Test Terminal 1 (Used for Demonstration)
57	P07(RST)	RST	I	Reset Input
58	P06(PSBT0)	CKDV2	O	Master Clock Switching Signal
59	P05(SBT1)	MCK	O	D.F. Control Clock (Digital Input, When CD is used.)
60	P04(SBI1)	MLEN	O	D.F. Control Latch Enable (Digital Input, When CD is used.)
61	P03(SBO1)	MDT	O	D.F. Control Data (Digital Input, When CD is used.)
62	P02(SBT0)	DSPCLK	O	Main Microcomputer Command Transmit-Receive Serial Clock
63	P01(SBI0)	STAUS	I	Main Microcomputer Status Receive Serial Data
64	P00(SBO0)	CMD	O	Main Microcomputer Command Transmit Serial Data
65	P47	K7	I	Key Input
66	P46	K6	I	Key Input
67	P45	K5	I	Key Input
68	P44	FSEL	O	De-emphasis Filter Setting Terminal
69	P43	DEEMPH	O	De-emphasis Setting Terminal
70	P42	K2	I	Destination Setting
71	P41	K1	I	Destination Setting
72	P40	K0	I	Destination Setting
73	P34(PWM0)	RSTN	O	Reset Output
74	P33(IRQ3)	D.F.2.I	I	HDCD Detection
75	P32(IRQ2)	REM	I	Wired Remote Control Input
76	P31(IRQ1)	REMOCON	I	Remote Control Input
77	P30(IRQ0)	ERF	I	Error Flag
78	VREFL	VREFL		
79	P27(ADMIN7)	P/S		Open
80	P26(ADMIN6)	D.F.2	O	LED for Digital Filter 2 Display
81	P25(ADMIN5)	D.F.1	O	LED for Digital Filter 1 Display
82	P24(ADMIN4)	SW2	I	Switch Input for Digital Selector
83	P23(ADMIN3)	SW1	I	Switch Input for Digital Selector
84	P22(ADMIN2)	P/S	O	LED for POWER/STANBY Display

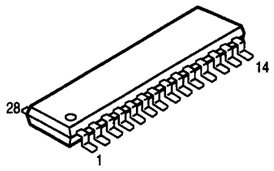
PCM1704U-J (IC305, 306, 309, 310)

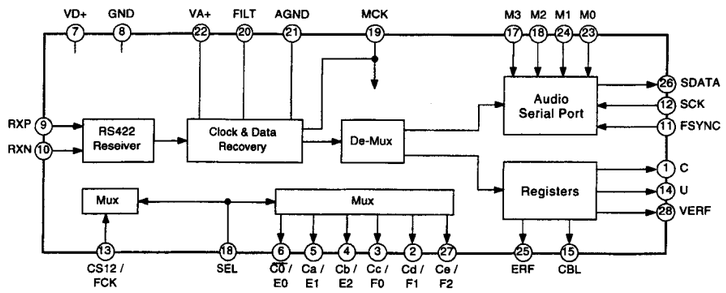


Pin No.	Pin No.	I/O	Pin No.
1	DATA	IN	Serial Audio Input
2	BCLK	IN	Bit Clock Input for Serial Audio Data Input
3	NC	-	NC (1)
4	$-V_{DD}$	-	Digital Power Supply -5V
5	DGND	-	Digital GND
6	$+V_{DD}$	-	Digital Power Supply +5V
7	WCLK	IN	Data Latch Accept Input
8	NC	-	NC (1)
9	$\overline{20BIT}$	IN	INPUT Data Language Select (2)
10	$\overline{INVERT}$	IN	INPUT Data Polarity Select (2)
11	$+V_{CC}$	-	Analog Power Supply +5V
12	BPO DC	-	Bipotar Offset De-Coupling Capacitor
13	NC	-	NC (1)
14	I_{OUT}	OUT	Audio Signal Analog Current Output
15	AGND	-	Analog GND
16	AGND	-	Analog GND
17	SERVO DC	-	Servo Amp De-coupling Capacitor
18	NC	-	NC (1)
19	REF DC	-	Band Cap. Reference De-coupling Capacitor
20	$-V_{CC}$	-	Analog Power Supply -5V

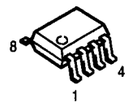
Remarks)
(1) Not connected (Not used)
(2) Internal Pull -up

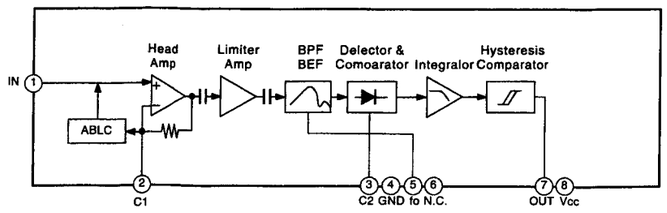
CS8414-CS (IC103)



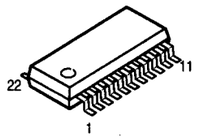


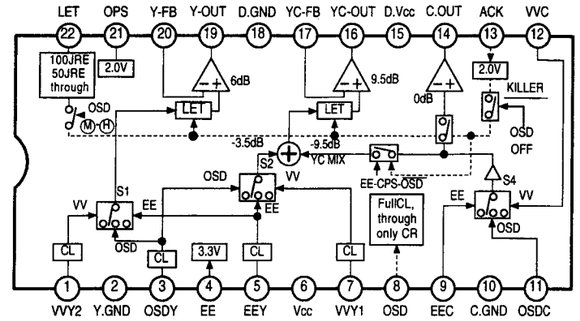
CXA1511M (IC508)



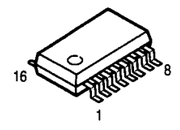


AN3581S (IC501)

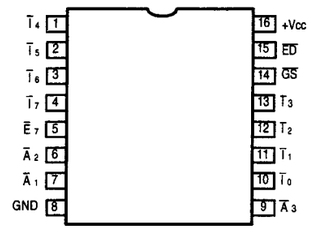




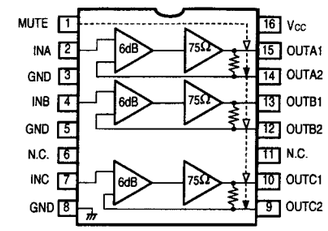
74F148SJL (IC131)
BA7660FS (IC502)



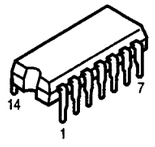
74F148SJL

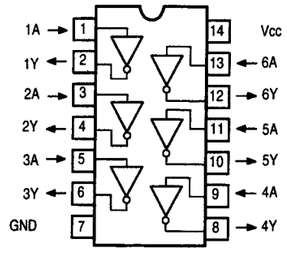


BA7660FS

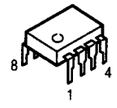


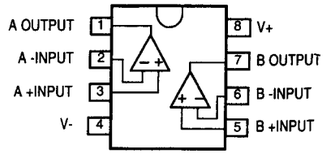
TC74HCU04AF (IC109, 113, 133, 134, 506, 507)



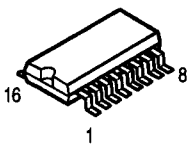


UPC4570C (IC307, 308, 311, 312)
NJM4556AD (IC701, 702)
NE5532 (IC315, 316)

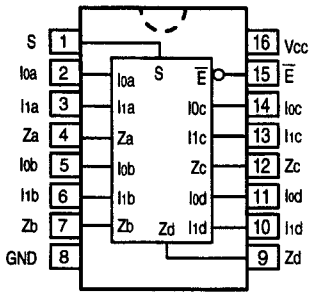




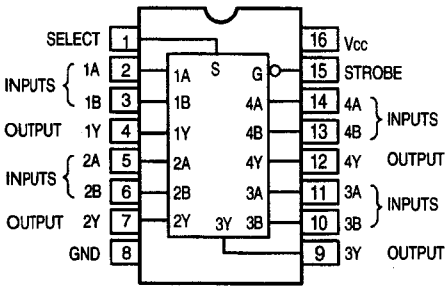
HD74AC157F (IC104, 105)
HD74HC157AF (IC118, 119, 132)
TC74HC157AF (IC503~505)
TC74HC123AF (IC108, 129, 130)



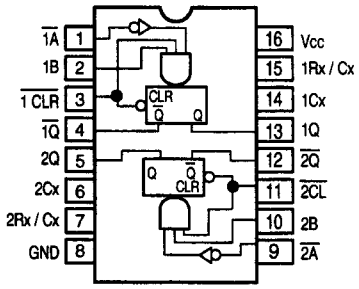
HD74AC157F



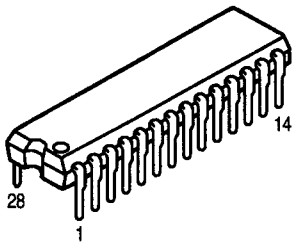
HD74HC157AF
TC74HC157AF

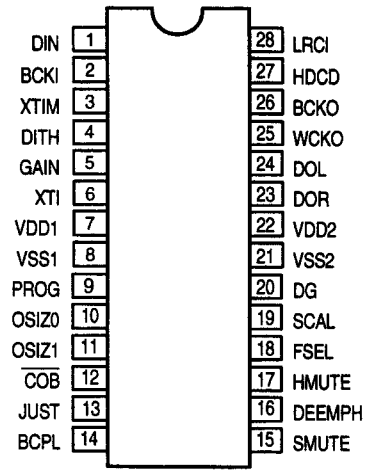


TC74HC123AF

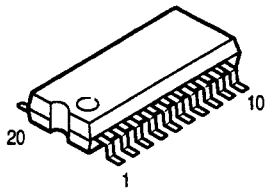


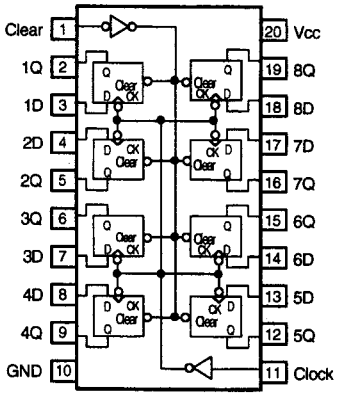
PMD100 (IC102)



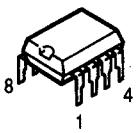


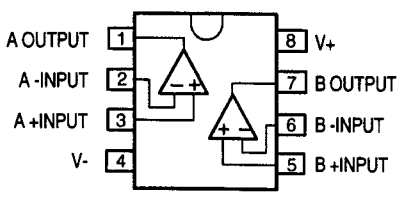
HD74HC273FP (IC124, 125)



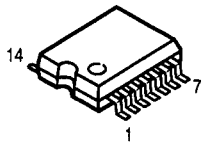


OP275GP (IC313, 314, 317, 318)

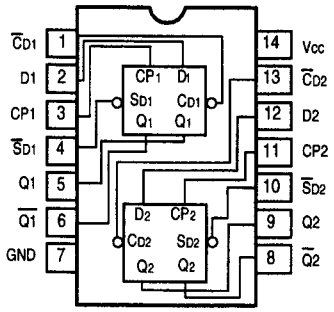




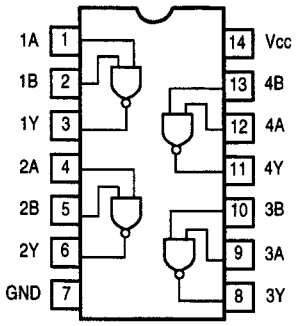
HD74AC74FP (IC106)
TC74HC00AF (IC107, 111)
TC74HC32AF (IC110)
TC74HC164AF (IC114~117, 120, 121)
HD74HC74FP (IC122)
HD74HC86FP (IC123)
TC74HC4078F (IC126~128)
TC74HC02AF (IC136)



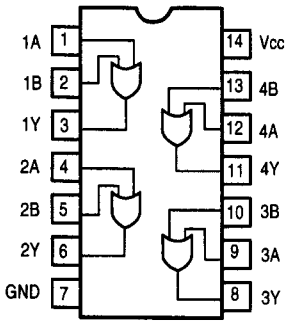
HD74AC74FP



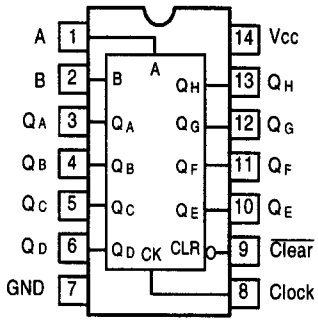
TC74HC00AF



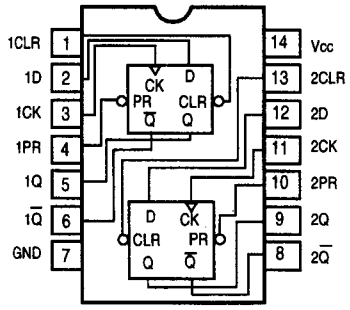
TC74HC32AF



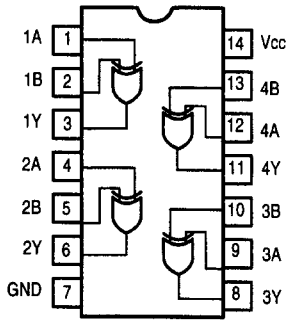
TC74HC164AF



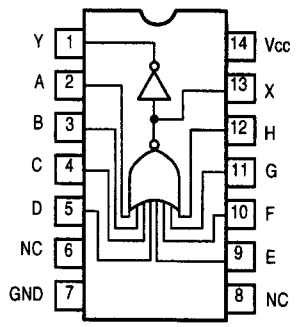
HD74HC74FP



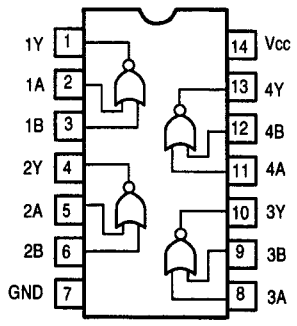
HD74HC86FP



TC74HC4078F



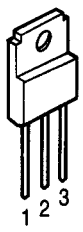
TC74HC02AF



NJM7812FA (IC811)
NJM7805FA (IC301, 302, 806)
NJM7809FA (IC137)

1: INPUT
2: GND
3: OUT PUT

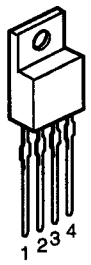
NJM7912FA (IC812)
NJM7905FA (IC303, 304)

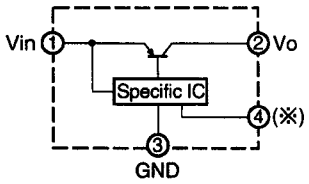


1: GND
2: OUT PUT
3: INPUT

● IC PROTECTOR

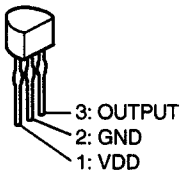
PQ3RD13 (IC804)
PQ15RW11 (IC805, 808, 809, 810)



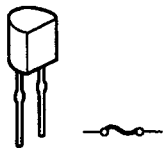


(※)	Pin ④
PQ3RD13	Vc : On-off control
PQ15RW11	Vadj : Voltage adjust

PST600C (IC602)

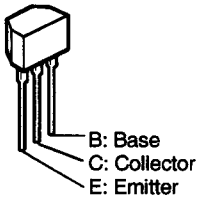


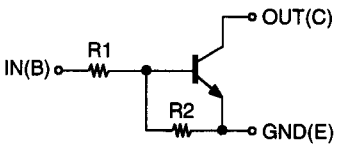
ICP-N20 (IC807)



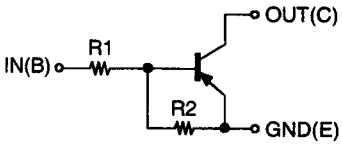
● TRANSISTORS

RN1202NPN
RN2202PNP



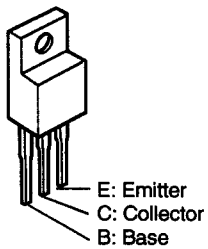


	R1	R2
RN1202	10 Kohm	10 Kohm

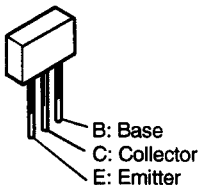


	R1	R2
RN2202	10 Kohm	10 Kohm

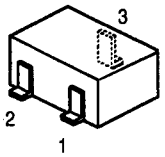
2SB1185 (E/F)



2SC3311A

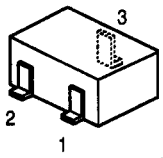


2SA1022
2SC2295
2SC2996
2SC3326 (A/B)
2SD601A



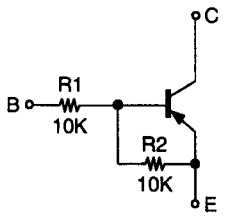
1: Emitter
2: Base
3: Collector

DTA114EK
DTC114EK
DTC124EK

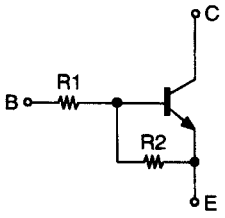


1: Emitter
2: Collector
3: Base

DTA114EK



DTC114EK
DTC124EK

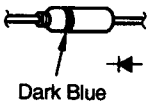


	R1	R2
DTC114EK	10 Kohm	10 Kohm
DTC124EK	22 Kohm	22 Kohm

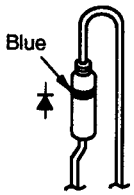
● DIODE (including LED)

MTZJ3.0A
MTZJ33A

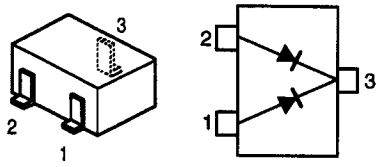
ISS270A



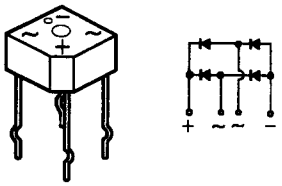
1SR35-200A



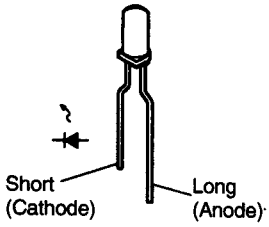
MA152WK



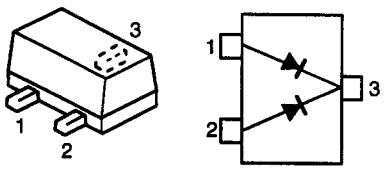
S4VB20



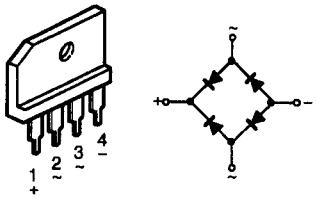
SEL1210S (Red)
SEL1810A (Amber)
SELU1E10 CXM-002 (Blue)



MA742

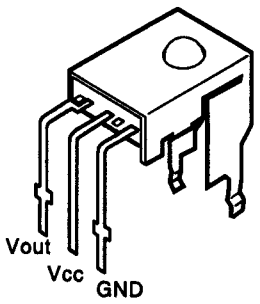


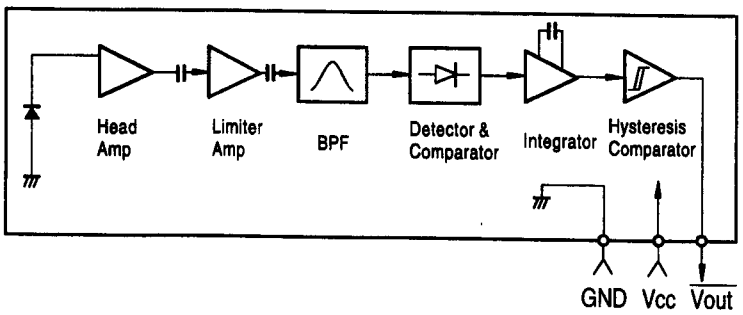
RBA-402



● REMOTE CONTROL SENSOR

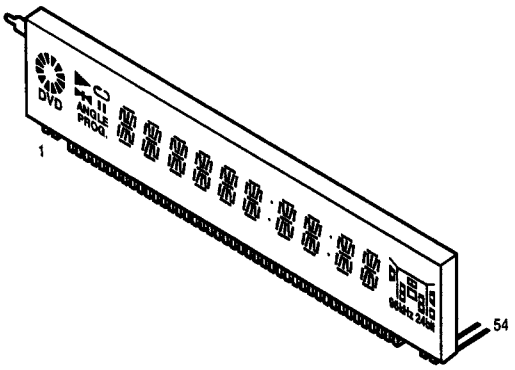
GP1U271X





● FL DISPLAY 13-BT-155GK(FL601)

(Part No.: 393 8037 003)



Pin Connection

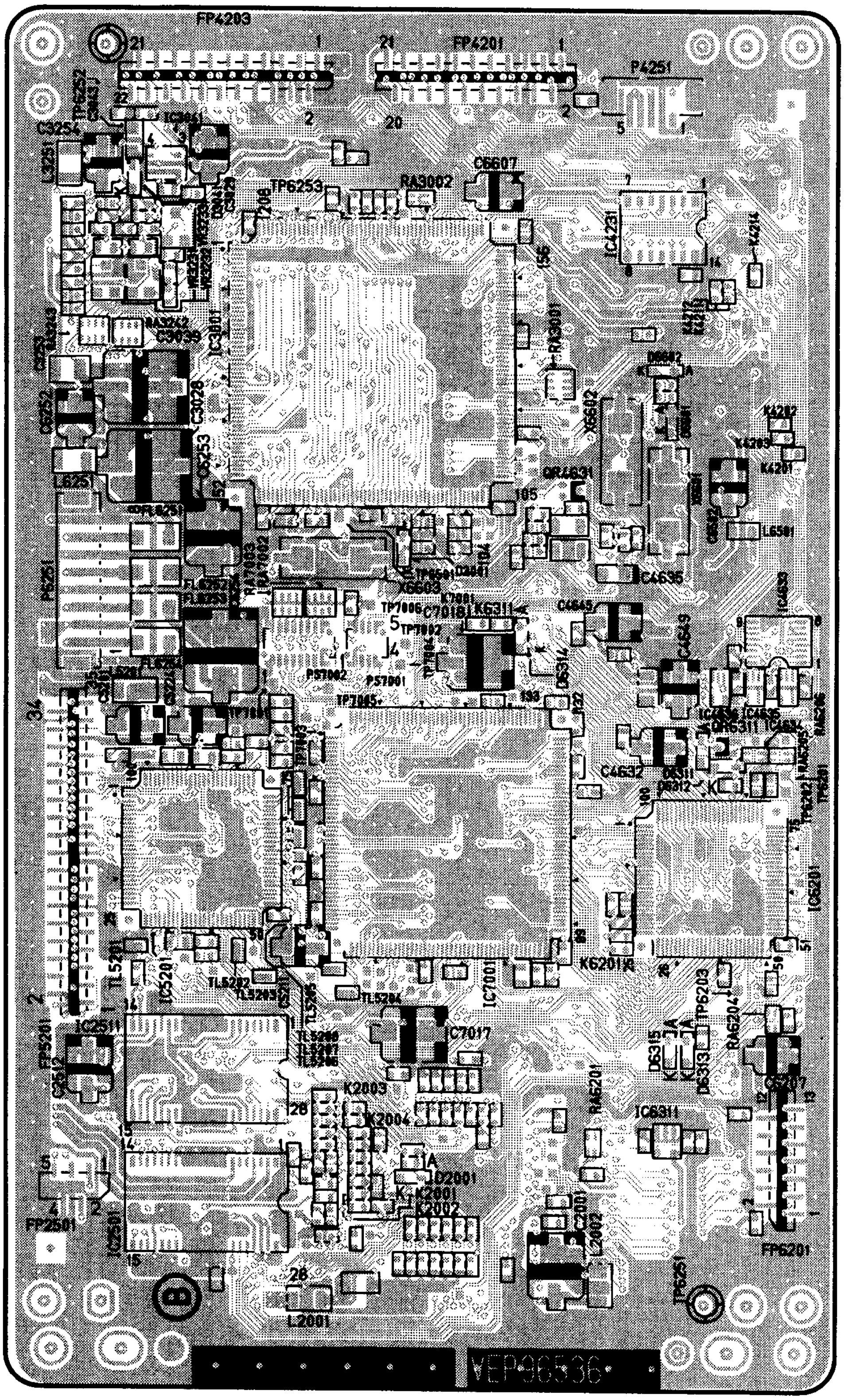
Pin No.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27
Connection	F-	F-	NP	NP	13G	12G	11G	10G	9G	8G	7G	6G	5G	4G	3G	2G	1G	NX	NX	NX	NX	NX	NX	NX	NX	NX	NX

Pin No.	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54
Connection	NX	NX	NX	NX	NX	NX	NX	NX	P15	P14	P13	P12	P11	P10	P9	P8	P7	P6	P5	P4	P3	P2	P1	NP	NP	F+	F+

NOTE 1) F-,F+ ····· Filament
2) NP ····· No Pin
3) NX ····· No Connection
4) P1~P15 ····· Anode
5) 1G~13G ····· Grid
6) View Angle should be 26° min. at upper side.

PRINTED WIRING BOARDS

MAIN P.W.B. UNIT
Component Side


FP4203
FP4201
P4251
C3254
L3251
IC3051
TP6253
RA3002
C6607
IC4231
K4214
RA3242
C3039
IC3801
C3028
C6252
C6253
L6251
P5251
RA3001
D6602
X6602
QR4631
K4202
K4203
K4201
L6501
X6603
C4635
TP7006
C7018
K6311
TP7002
C4645
C4649
IC4633
P57002
P57001
D6314
TP7005
C4632
D6311
D6312
IC5201
TL5201
TL5202
TL5203
TL5204
IC7001
K6201
IC6201
TP6203
RA6204
IC2511
FP5201
C2512
C7017
K2003
K2004
D2001
K2001
K2002
D6315
D6313
RA6201
IC6311
C6207
C2001
L2002
FP2501
IC2501
L2001
TP6251
FP6201
VEP96536

1 2 3 4

A

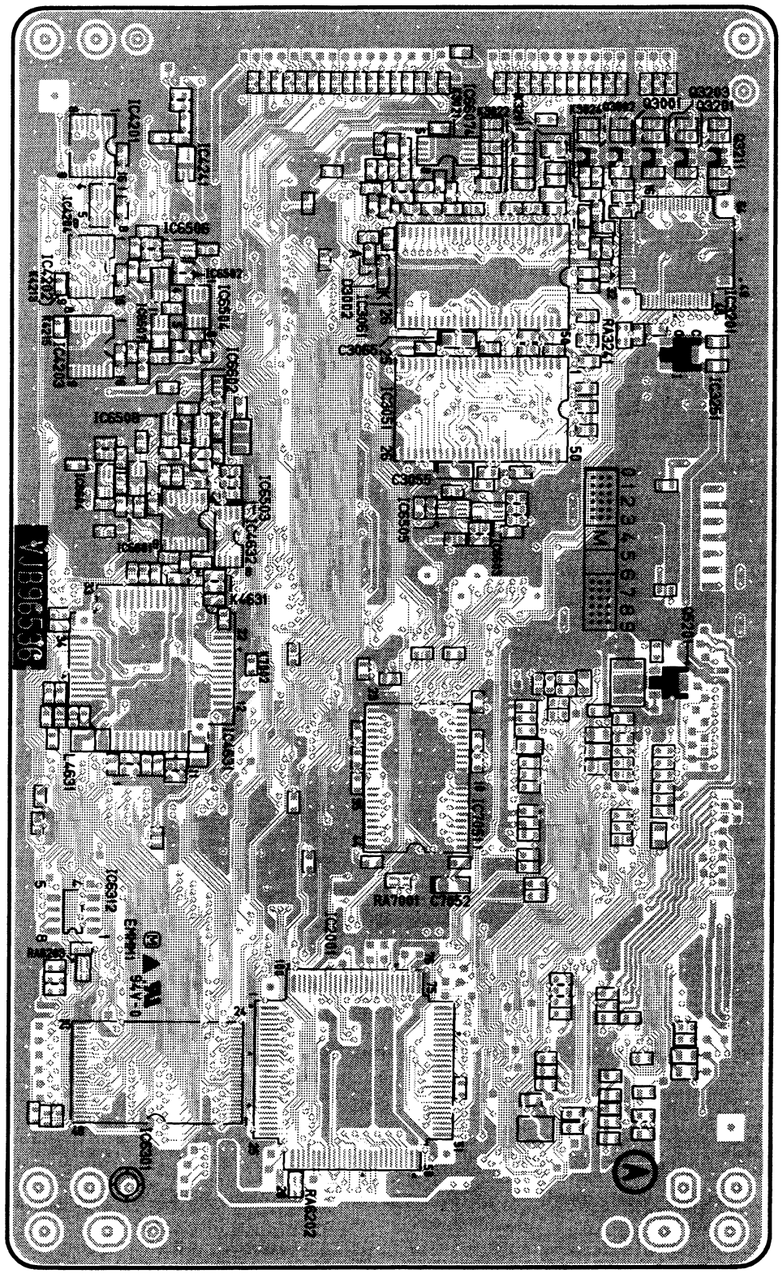
B

C

D

E

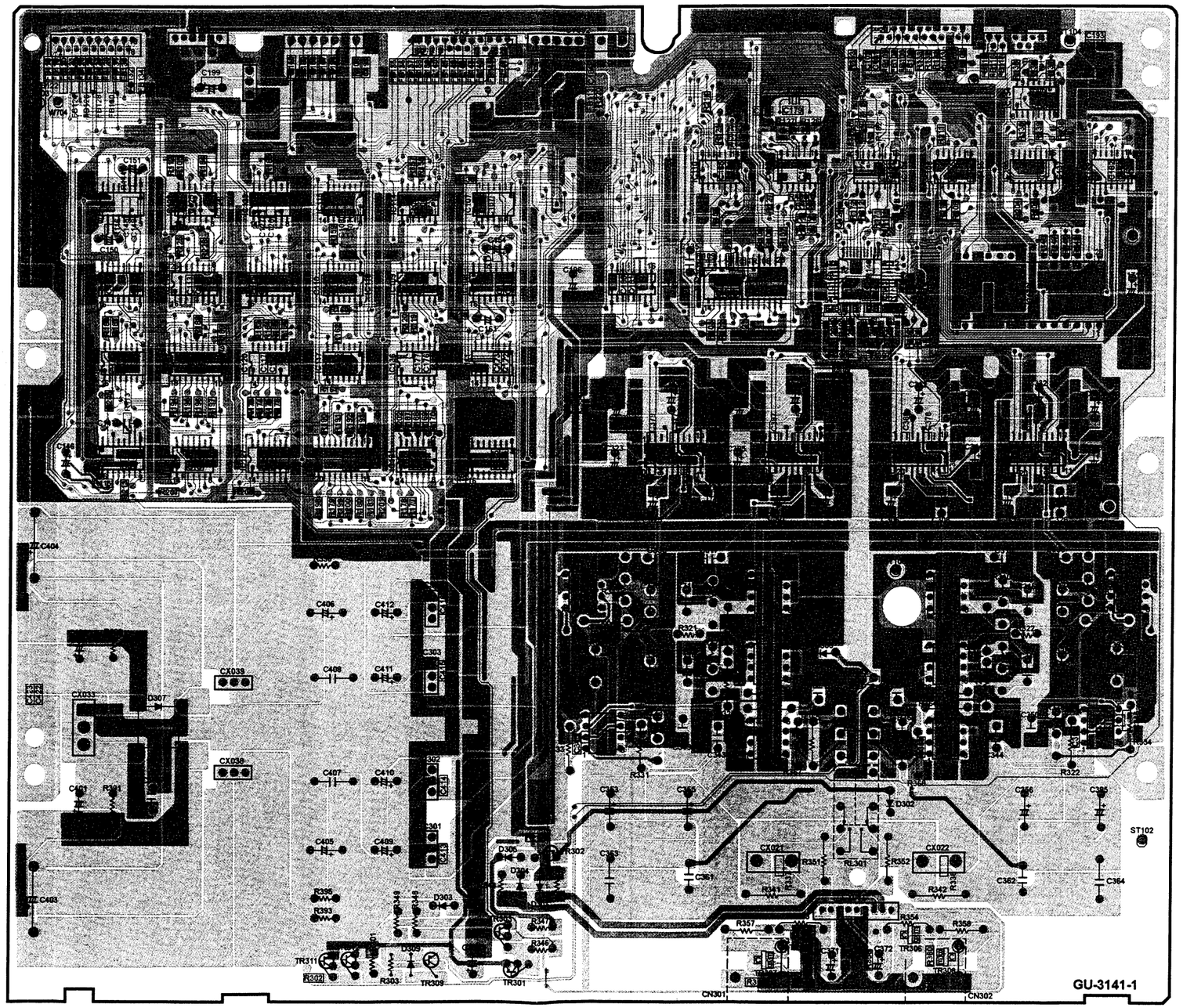
Pattern Side



1 2 3 4 5 6 7 8

A B C D E

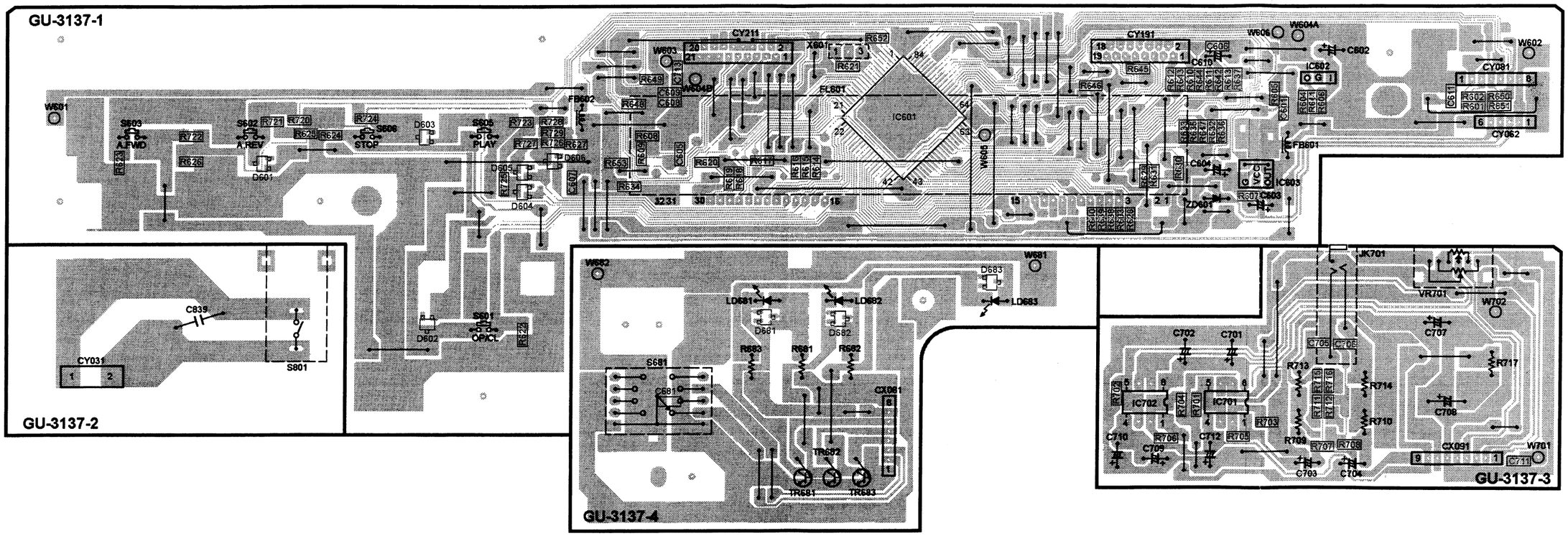
GU-3141 AUDIO I/F P.W.B. UNIT



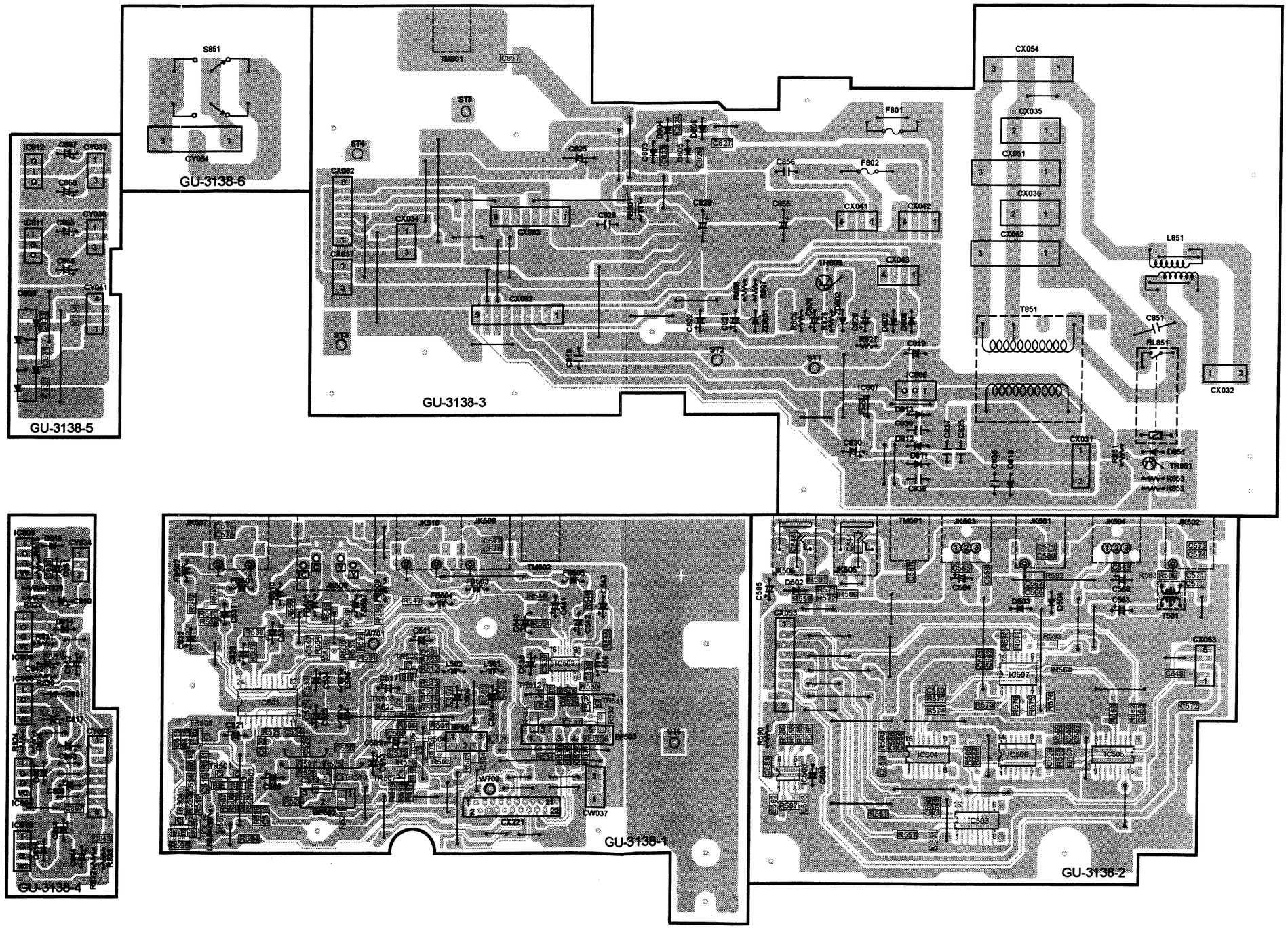
1 2 3 4 5 6 7 8

A B C D E

GU-3137 DISPLAY P.W.B. UNIT



GU-3138 AV/D. IN P.W.B. UNIT



NOTE FOR PARTS LIST

- Part indicated with the mark "⊙" are not always in stock and possibly to take a long period of time for supplying, or in some case supplying of part may be refused.
- When ordering of part, clearly indicate "1" and "I" (i) to avoid mis-supplying.
- Ordering part without stating its part number can not be supplied.
- Part indicated with the mark "★" is not illustrated in the exploded view.
- Not including Carbon Film ±5%, 1/4W Type in the P.W.Board parts list. (Refer to the Schematic Diagram for those parts.)

WARNING:
Parts marked with this symbol ⚠▒▒ have critical characteristics.
Use ONLY replacement parts recommended by the manufacturer.

● Resistors

Ex.: RN (Type) 14K (Shape and performance) 2E (Power) 182 (Resistance) G (Allowable error) FR (Others)

RD : Carbon	2B : 1/8W	F : ±1%	P : Pulse-resistant type
RC : Composition	2E : 1/4W	G : ±2%	NL : Low noise type
RS : Metal oxide film	2H : 1/2W	J : ±5%	NB : Non-burning type
RW : Winding	3A : 1W	K : ±10%	FR : Fuse-resistor
RN : Metal film	3D : 2W	M : ±20%	F : Lead wire forming
RK : Metal mixture	3F : 3W		
	3H : 5W		

*** Resistance**

1 8 2 ⇒ 1800 ohm = 1.8 kohm
- 2-digit effective number.
- Indicates number of zeros after effective number.

• Units: ohm

1 R 2 ⇒ 1.2 ohm
- 1-digit effective number.
- 2-digit effective number, decimal point indicated by R.

• Units: ohm

● Capacitors

Ex.: CE (Type) 04W (Shape and performance) 1H (Dielectric strength) 2R2 (Capacity) M (Allowable error) BP (Others)

CE : Aluminum foil electrolytic	0J : 6.3V	F : ±1%	HS : High stability type
CA : Aluminum solid electrolytic	1A : 10V	G : ±2%	BP : Non-polar type
CS : Tantalum electrolytic	1C : 16V	J : ±5%	HR : Ripple-resistant type
CQ : Film	1E : 25V	K : ±10%	DL : For change and discharge
CK : Ceramic	1V : 35V	M : ±20%	HF : For assuring high frequency
CC : Ceramic	1H : 50V	Z : +80% −20%	U : UL part
CP : Oil	2A : 100V	P : +100% −0%	C : CSA part
CM : Mica	2B : 125V	C : ±0.25pF	W : UL-CSA type
CF : Metallized	2C : 160V	D : ±0.5pF	F : Lead wire forming
CH : Metallized	2D : 200V	= : Others	
	2E : 250V		
	2H : 500V		
	2J : 630V		

*** Capacity (electrolyte only)**

2 2 2 ⇒ 2200μF
- 2-digit effective number.
- Indicates number of zeros after effective number.

• Units: μF.

2 R 2 ⇒ 2.2μF
- 1-digit effective number.
- 2-digit effective number, decimal point indicated by R.

• Units: μF.

*** Capacity (except electrolyte)**

2 2 2 ⇒ 2200pF=0.0022μF
- (More than 2) — Indicates number of zeros after effective number.
- 2-digit effective number.

• Units: μF.

2 2 1 ⇒ 220pF
- (0 or 1) — Indicates number of zeros after effective number.
- 2-digit effective number.

• Units: pF.

• When the dielectric strength is indicated in AC, "AC" is included after the dieelectric strength value.

PARTS LIST OF P.W.B. UNIT

GU-3141 AUDIO I/F P.W.B. UNIT ASS'Y

Ref. No.	Part No.	Part Name	Remarks
SEMICONDUCTORS GROUP			
IC101	262 2531 007	IC DXP6001AF	
IC102	262 2532 006	IC PMD100	
IC103	262 2491 901	IC CS8414-CS	
IC104,105	262 2192 909	IC TC74AC157F	
IC106	262 1881 907	IC HD74AC74FP	
IC107	262 1718 902	IC TC74HC00AF	
IC108	262 1348 903	IC TC74HC123AF	
IC109	262 1205 907	IC TC74HCU04AF	
IC110	262 1636 903	IC TC74HC32AF	
IC111	262 1718 902	IC TC74HC00AF	
IC113	262 1205 907	IC TC74HCU04AF	
IC114~117	262 1638 901	IC TC74HC164AF	
IC118,119	262 2230 900	IC TC74HC157AF	
IC120,121	262 1638 901	IC TC74HC164AF	
IC122	262 1665 903	IC HD74HC74FP	
IC123	262 0953 904	IC HD74HC86FP	
IC124,125	262 0949 905	IC HD74HC273FP	
IC126~128	262 0951 906	IC TC74HC4078F	
IC129,130	262 1348 903	IC TC74HC123AF	
IC131	262 2186 902	IC 74F148SJL	
IC132	262 2230 900	IC TC74HC157AF	
IC133,134	262 1205 907	IC TC74HCU04AF	
IC136	262 1345 906	IC TC74HC02AF	
IC137	263 0753 000	IC NJM7809FA(S)	
IC301,302	263 0809 006	IC NJM7805FA(S)	
IC303,304	263 0554 005	IC NJM7905FA	
IC305,306	262 2530 901	IC PCM1704U-J	
IC307,308	262 0864 006	IC UPC4570C	
IC309,310	262 2530 901	IC PCM1704U-J	
IC311,312	262 0864 006	IC UPC4570C	
IC313,314	263 0990 009	IC OP275GP	
IC315,316	262 2182 003	IC NE5532(PHI)	
IC317,318	263 0990 009	IC OP275GP	
TR105	269 0082 902	Transistor DTC114EK	
TR106	269 0083 901	Transistor DTA114EK	
TR301,302	269 0026 900	Transistor RN2202	
TR303	269 0025 901	Transistor RN1202	
TR305~308	273 0414 906	Transistor 2SC3326(A/B)	
TR309	269 0026 900	Transistor RN2202	
TR311	269 0026 900	Transistor RN2202	
TR312	269 0025 901	Transistor RN1202	
D301~305	276 0553 905	Diode 1SR35-200A	
D307	276 0305 001	Diode S4VB20	
D308,309	276 0553 905	Diode 1SR35-200A	

Ref. No.	Part No.	Part Name	Remarks
RESISTORS GROUP			
R101	247 0018 905	Carbon chip 0ohm 1/10W	RM73B--0R0K
R102	247 0006 962	Carbon chip 470ohm 1/10W	RM73B--471J
R103	247 0006 920	Carbon chip 330ohm 1/10W	RM73B--331J
R104,105	247 0018 905	Carbon chip 0ohm 1/10W	RM73B--0R0K
R106	247 0006 962	Carbon chip 470ohm 1/10W	RM73B--471J
R107,108	247 0018 905	Carbon chip 0ohm 1/10W	RM73B--0R0K
R109	247 0006 962	Carbon chip 470ohm 1/10W	RM73B--471J
R110	247 0006 962	Carbon chip 470ohm 1/10W	RM73B--471J
R113	247 0012 927	Carbon chip 100kohm 1/10W	RM73B--104J
R114~118	247 0011 944	Carbon chip 47kohm 1/10W	RM73B--473J
R119	247 0018 905	Carbon chip 0ohm 1/10W	RM73B--0R0K
R121	247 0006 962	Carbon chip 470ohm 1/10W	RM73B--471J
R122~125	247 0004 922	Carbon chip 47ohm 1/10W	RM73B--470J
R126	247 0014 967	Carbon chip 1Mohm 1/10W	RM73B--105J
R127	247 0018 905	Carbon chip 0ohm 1/10W	RM73B--0R0K
R128,129	247 0006 962	Carbon chip 470ohm 1/10W	RM73B--471J
R130	247 0007 945	Carbon chip 1kohm 1/10W	RM73B--102J
R131~133	247 0018 905	Carbon chip 0ohm 1/10W	RM73B--0R0K
R137~139	247 0006 920	Carbon chip 330ohm 1/10W	RM73B--331J
R140	247 0006 962	Carbon chip 470ohm 1/10W	RM73B--471J
R145~148	247 0004 922	Carbon chip 47ohm 1/10W	RM73B--470J
R150	247 0018 905	Carbon chip 0ohm 1/10W	RM73B--0R0K
R151,152	247 0004 922	Carbon chip 47ohm 1/10W	RM73B--470J
R153	247 0018 905	Carbon chip 0ohm 1/10W	RM73B--0R0K
R154	247 0011 944	Carbon chip 47kohm 1/10W	RM73B--473J
R155	247 0006 920	Carbon chip 330ohm 1/10W	RM73B--331J
R156	247 0013 942	Carbon chip 330kohm 1/10W	RM73B--334J
R157~161	247 0006 920	Carbon chip 330ohm 1/10W	RM73B--331J
R162	247 0006 962	Carbon chip 470ohm 1/10W	RM73B--471J
R163~182	247 0006 920	Carbon chip 330ohm 1/10W	RM73B--331J
R183	247 0005 921	Carbon chip 120ohm 1/10W	RM73B--121J
R184~201	247 0006 920	Carbon chip 330ohm 1/10W	RM73B--331J
R203~207	247 0006 920	Carbon chip 330ohm 1/10W	RM73B--331J
R208~211	247 0018 905	Carbon chip 0ohm 1/10W	RM73B--0R0K
R212	247 0006 920	Carbon chip 330ohm 1/10W	RM73B--331J
R213	247 0018 905	Carbon chip 0ohm 1/10W	RM73B--0R0K
R215	247 0018 905	Carbon chip 0ohm 1/10W	RM73B--0R0K
R218~221	247 0018 905	Carbon chip 0ohm 1/10W	RM73B--0R0K
R223	247 0009 985	Carbon chip 10kohm 1/10W	RM73B--103J
R226	247 0018 905	Carbon chip 0ohm 1/10W	RM73B--0R0K
R227,228	247 0009 985	Carbon chip 10kohm 1/10W	RM73B--103J
R301	244 2043 940	Metal oxide 2.2kohm 1W	RS14B3A222JNBS(S)
R302	247 0006 920	Carbon chip 330ohm 1/10W	RM73B--331J
R303	244 2051 974	Metal oxide 1kohm 1W	RS14B3A102JNBS(S)
R307,308	241 2423 972	Carbon film 3.6kohm 1/4W	RD14B2E362J(PSNB)
R309,310	241 2424 926	Carbon film 5.6kohm 1/4W	RD14B2E562J(PSNB)
R311,312	247 0018 905	Carbon chip 0ohm 1/10W	RM73B--0R0K
R317,318	241 2424 926	Carbon film 5.6kohm 1/4W	RD14B2E562J(PSNB)
R319,320	241 2423 972	Carbon film 3.6kohm 1/4W	RD14B2E362J(PSNB)

Ref. No.	Part No.	Part Name	Remarks
R321~324	241 2423 927	Carbon film 2.2kohm 1/4W	RD14B2E222J(PSNB)
R325,326	241 2424 942	Carbon film 6.8kohm 1/4W	RD14B2E682J(PSNB)
R327,328	241 2423 972	Carbon film 3.6kohm 1/4W	RD14B2E362J(PSNB)
R329	241 2422 973	Carbon film 1.3kohm 1/4W	RD14B2E132J(PSNB)
R331,332	241 2423 943	Carbon film 2.7kohm 1/4W	RD14B2E272J(PSNB)
R333~336	241 2424 900	Carbon film 4.7kohm 1/4W	RD14B2E472J(PSNB)
R337,338	247 0012 927	Carbon chip 100kohm 1/10W	RM73B--104J
R341,342	241 2434 013	Carbon film 150ohm 1/2W	RD05A2H151J(RMG)
R343,344	244 2058 032	Metal oxide 47ohm 1W	RS14B3A470JNBS (RSFSV)
R346	244 2055 941	Metal oxide 330ohm 1W	RS14B3A331JNBS(S)
R347	244 2051 974	Metal oxide 1kohm 1W	RS14B3A102JNBS(S)
R348	244 2058 016	Metal oxide 2.2kohm 1W	RS14B3A222JNBS (RSFSV)
R349	244 2055 909	Metal oxide 91ohm 1W	RS14B3A910JNBS(S)
R351,352	241 2421 961	Carbon film 470ohm 1/4W	RD14B2E471J(PSNB)
R353,354	241 2420 962	Carbon film 180ohm 1/4W	RD14B2E181J(PSNB)
R355,356	247 0012 927	Carbon chip 100kohm 1/10W	RM73B--104J
R357,358	241 2420 962	Carbon film 180ohm 1/4W	RD14B2E181J(PSNB)
R359,360	247 0008 944	Carbon chip 2.7kohm 1/10W	RM73B--272J
R361,362	247 0009 914	Carbon chip 5.1kohm 1/10W	RM73B--512J
R364	241 2422 973	Carbon film 1.3kohm 1/4W	RD14B2E132J(PSNB)
R365~368	241 2424 984	Carbon film 10kohm 1/4W	RD14B2E103J(PSNB)
R371,372	247 0018 905	Carbon chip 0ohm 1/10W	RM73B--0R0K
R391	244 2051 974	Metal oxide 1kohm 1W	RS14B3A102JNBS(S)
R392	244 2043 940	Metal oxide 2.2kohm 1W	RS14B3A222JNBS(S)
R393	244 2052 931	Metal oxide 390ohm 1W	RS14B3A391JNBS(S)
R395	244 2052 931	Metal oxide 390ohm 1W	RS14B3A391JNBS(S)
R396	244 2051 990	Metal oxide 4.7kohm 1W	RS14B3A472JNBS(S)
CAPACITORS GROUP			
C101	257 0010 900	Ceramic chip 0.01μF/50V	CK73B1H103K
C102	257 0007 900	Ceramic chip 1000pF/50V	CC73SL1H102J
C103	257 0010 900	Ceramic chip 0.01μF/50V	CK73B1H103K
C104	257 0007 900	Ceramic chip 1000pF/50V	CC73SL1H102J
C105	257 0010 900	Ceramic chip 0.01μF/50V	CK73B1H103K
C106	257 0007 900	Ceramic chip 1000pF/50V	CC73SL1H102J
C107	257 0010 900	Ceramic chip 0.01μF/50V	CK73B1H103K
C108	257 0007 900	Ceramic chip 1000pF/50V	CC73SL1H102J
C109	257 0010 900	Ceramic chip 0.01μF/50V	CK73B1H103K
C110	257 0007 900	Ceramic chip 1000pF/50V	CC73SL1H102J
C111	257 0010 900	Ceramic chip 0.01μF/50V	CK73B1H103K
C112	257 0007 900	Ceramic chip 1000pF/50V	CC73SL1H102J
C113	257 0010 900	Ceramic chip 0.01μF/50V	CK73B1H103K
C114	257 0007 900	Ceramic chip 1000pF/50V	CC73SL1H102J
C115	257 0010 900	Ceramic chip 0.01μF/50V	CK73B1H103K
C116	257 0007 900	Ceramic chip 1000pF/50V	CC73SL1H102J
C117	257 0010 900	Ceramic chip 0.01μF/50V	CK73B1H103K
C118	257 0007 900	Ceramic chip 1000pF/50V	CC73SL1H102J
C119	257 0010 900	Ceramic chip 0.01μF/50V	CK73B1H103K
C120	257 0007 900	Ceramic chip 1000pF/50V	CC73SL1H102J

Ref. No.	Part No.	Part Name	Remarks
C121,122	257 0010 900	Ceramic chip 0.01μF/50V	CK73B1H103K
C123	257 0007 900	Ceramic chip 1000pF/50V	CC73SL1H102J
C124	257 0010 900	Ceramic chip 0.01μF/50V	CK73B1H103K
C125	257 0007 900	Ceramic chip 1000pF/50V	CC73SL1H102J
C126	257 0010 900	Ceramic chip 0.01μF/50V	CK73B1H103K
C127	257 0007 900	Ceramic chip 1000pF/50V	CC73SL1H102J
C128	257 0010 900	Ceramic chip 0.01μF/50V	CK73B1H103K
C129	257 0007 900	Ceramic chip 1000pF/50V	CC73SL1H102J
C130	257 0010 900	Ceramic chip 0.01μF/50V	CK73B1H103K
C131	257 0007 900	Ceramic chip 1000pF/50V	CC73SL1H102J
C132	257 0010 900	Ceramic chip 0.01μF/50V	CK73B1H103K
C133	257 0007 900	Ceramic chip 1000pF/50V	CC73SL1H102J
C134	257 0011 996	Ceramic chip 0.1μF/25V	CK73B1E104K
C135	256 1058 955	Metallized 0.068μF/50V	CF93A1H683J(JL)
C136	257 0010 900	Ceramic chip 0.01μF/50V	CK73B1H103K
C137	257 0007 900	Ceramic chip 1000pF/50V	CC73SL1H102J
C138	257 0010 900	Ceramic chip 0.01μF/50V	CK73B1H103K
C139	257 0007 900	Ceramic chip 1000pF/50V	CC73SL1H102J
C140	257 0010 900	Ceramic chip 0.01μF/50V	CK73B1H103K
C141	257 0007 900	Ceramic chip 1000pF/50V	CC73SL1H102J
C142	257 0010 900	Ceramic chip 0.01μF/50V	CK73B1H103K
C143	257 0007 900	Ceramic chip 1000pF/50V	CC73SL1H102J
C144	257 0010 900	Ceramic chip 0.01μF/50V	CK73B1H103K
C145	257 0007 900	Ceramic chip 1000pF/50V	CC73SL1H102J
C146	254 4313 963	Electrolytic 1μF/50V	CE04W1H010M(ASF)
C147	255 1265 965	Mylar film 0.018μF/50V	CQ93M1H183J(B)
C148	257 0010 900	Ceramic chip 0.01μF/50V	CK73B1H103K
C149	257 0007 900	Ceramic chip 1000pF/50V	CC73SL1H102J
C150,151	254 4313 963	Electrolytic 1μF/50V	CE04W1H010M(ASF)
C152	257 0010 900	Ceramic chip 0.01μF/50V	CK73B1H103K
C153	257 0007 900	Ceramic chip 1000pF/50V	CC73SL1H102J
C154	254 4313 963	Electrolytic 1μF/50V	CE04W1H010M(ASF)
C155	257 0010 900	Ceramic chip 0.01μF/50V	CK73B1H103K
C156	257 0007 900	Ceramic chip 1000pF/50V	CC73SL1H102J
C157	257 0010 900	Ceramic chip 0.01μF/50V	CK73B1H103K
C158	257 0007 900	Ceramic chip 1000pF/50V	CC73SL1H102J
C159	257 0010 900	Ceramic chip 0.01μF/50V	CK73B1H103K
C160	257 0007 900	Ceramic chip 1000pF/50V	CC73SL1H102J
C161	254 4313 963	Electrolytic 1μF/50V	CE04W1H010M(ASF)
C162	257 0010 900	Ceramic chip 0.01μF/50V	CK73B1H103K
C163	257 0007 900	Ceramic chip 1000pF/50V	CC73SL1H102J
C164	257 0010 900	Ceramic chip 0.01μF/50V	CK73B1H103K
C165	257 0007 900	Ceramic chip 1000pF/50V	CC73SL1H102J
C166	257 0010 900	Ceramic chip 0.01μF/50V	CK73B1H103K
C167	257 0007 900	Ceramic chip 1000pF/50V	CC73SL1H102J
C168	254 4356 739	Electrolytic 47μF/50V	CE04W1H470M(ARS)
C169	257 0010 900	Ceramic chip 0.01μF/50V	CK73B1H103K
C170	257 0007 900	Ceramic chip 1000pF/50V	CC73SL1H102J
C171	254 4356 739	Electrolytic 47μF/50V	CE04W1H470M(ARS)
C172	257 0010 900	Ceramic chip 0.01μF/50V	CK73B1H103K
C173	257 0007 900	Ceramic chip 1000pF/50V	CC73SL1H102J
C176	257 0010 900	Ceramic chip 0.01μF/50V	CK73B1H103K

Ref. No.	Part No.	Part Name	Remarks
C177	257 0007 900	Ceramic chip 1000pF/50V	CC73SL1H102J
C178,179	257 0002 921	Ceramic chip 10 pF/50V	CC73SL1H100D
C180	257 0010 900	Ceramic chip 0.01μF/50V	CK73B1H103K
C181	257 0007 900	Ceramic chip 1000pF/50V	CC73SL1H102J
C182	257 0010 900	Ceramic chip 0.01μF/50V	CK73B1H103K
C183	257 0007 900	Ceramic chip 1000pF/50V	CC73SL1H102J
C185	257 0010 900	Ceramic chip 0.01μF/50V	CK73B1H103K
C186	257 0007 900	Ceramic chip 1000pF/50V	CC73SL1H102J
C187	257 0010 900	Ceramic chip 0.01μF/50V	CK73B1H103K
C188	257 0007 900	Ceramic chip 1000pF/50V	CC73SL1H102J
C190	257 0010 900	Ceramic chip 0.01μF/50V	CK73B1H103K
C191	257 0007 900	Ceramic chip 1000pF/50V	CC73SL1H102J
C192	257 0010 900	Ceramic chip 0.01μF/50V	CK73B1H103K
C193	257 0007 900	Ceramic chip 1000pF/50V	CC73SL1H102J
C194	257 0010 900	Ceramic chip 0.01μF/50V	CK73B1H103K
C195	257 0007 900	Ceramic chip 1000pF/50V	CC73SL1H102J
C196	254 4356 713	Electrolytic 100μF/50V	CE04W1H101M(ARS)
C197	257 0010 900	Ceramic chip 0.01μF/50V	CK73B1H103K
C198	254 4313 963	Electrolytic 1μF/50V	CE04W1H010M(ASF)
C199	257 0010 900	Ceramic chip 0.01μF/50V	CK73B1H103K
C305,306	254 4356 726	Electrolytic 22μF/50V	CE04W1H220M(ARS)
C307,308	254 4356 713	Electrolytic 100μF/50V	CE04W1H101M (ARS)
C309~314	254 4356 739	Electrolytic 47μF/50V	CE04W1H470M (ARS)
C315,316	255 4242 943	Polypropylene film 33pF/100V	CQ93P2A330J(NH)
C317,318	255 4235 921	Polypropylene film 270pF/100V	CQ93P2A271J(NH)
C323,324	254 4356 726	Electrolytic 22μF/50V	CE04W1H220M (ARS)
C325,326	254 4356 713	Electrolytic 100μF/50V	CE04W1H101M (ARS)
C327~332	254 4356 739	Electrolytic 47μF/50V	CE04W1H470M (ARS)
C333,334	255 4242 943	Polypropylene film 33pF/100V	CQ93P2A330J(NH)
C335~338	255 4235 921	Polypropylene film 270pF/100V	CQ93P2A271J(NH)
C339,340	255 4235 905	Polypropylene film 68pF/100V	CQ93P2A680J(NH)
C341,342	257 0006 930	Ceramic chip 510pF/50V	CC73SL1H511J
C343,344	255 4237 945	Polypropylene film 1200pF/100V	CQ93P2A122J
C345,346	257 0003 933	Ceramic chip 30pF/50V	CC73SL1H300J
C347	255 4237 945	Polypropylene film 1200pF/100V	CQ93P2A122J
C348	257 0007 900	Ceramic chip 1000pF/50V	CC73SL1H102J
C349,350	255 4237 945	Polypropylene film 1200pF/100V	CQ93P2A122J
C351,352	257 0003 933	Ceramic chip 30pF/50V	CC73SL1H300J
C353	254 4356 742	Electrolytic 470μF/50V	CE04W1H471M(ARS)
C354	257 0010 900	Ceramic chip 0.01μF/50V	CK73B1H103K
C355,356	254 4356 742	Electrolytic 470μF/50V	CE04W1H471M(ARS)
C363,364	256 1054 001	Metallized 1μF/50V	CF93B1H105K(GSG)
C365	254 4498 707	Electrolytic 220μF/25V	CE04W1E221M(ARS)
C366	255 4237 945	Polypropylene film 1200pF/100V	CQ93P2A122J
C367,368	257 0002 921	Ceramic chip 10 pF/50V	CC73SL1H100D
C369	257 0007 900	Ceramic chip 1000pF/50V	CC73SL1H102J
C370	257 0010 900	Ceramic chip 0.01μF/50V	CK73B1H103K

Ref. No.	Part No.	Part Name	Remarks
C371,372	254 4356 739	Electrolytic 47μF/50V	CE04W1H470M(ARS)
C373	257 0007 900	Ceramic chip 1000pF/50V	CC73SL1H102J
C374	257 0010 900	Ceramic chip 0.01μF/50V	CK73B1H103K
C393~395	254 4356 742	Electrolytic 470μF/50V	CE04W1H471M(ARS)
C396	255 4235 057	Polypropylene film 0.1μF/100V	CQ93P2A104J(NH)
C401,402	254 4446 720	Electrolytic 2.2μF/50V	CE04W1H2R2M (ARSAG)
C403,404	254 4543 704	Electrolytic 3300μF/35V	CE04W1H332M (ARS)
C405,406	254 4445 705	Electrolytic 470μF/50V	CE04W1H471M (ARSG)
C407,408	256 1045 036	Metallized 1μF/63V	CF93B1J105K(SAG)
C409~412	254 4356 739	Electrolytic 47μF/50V	CE04W1H470M(ARS)
C418	257 0010 900	Ceramic chip 0.01μF/50V	CK73B1H103K
C419	257 0007 900	Ceramic chip 1000pF/50V	CC73SL1H102J
C420	257 0010 900	Ceramic chip 0.01μF/50V	CK73B1H103K
C421	257 0007 900	Ceramic chip 1000pF/50V	CC73SL1H102J
C422	257 0010 900	Ceramic chip 0.01μF/50V	CK73B1H103K
C423	257 0007 900	Ceramic chip 1000pF/50V	CC73SL1H102J

OTHER PARTS GROUP				Q'ty
CN301,302	204 8517 003	1P pin jack (S-GND)		2
CX021	205 0581 001	2P VH connector base		1
CX022	205 0581 069	2P VH-VH connector base		1
CX033	205 0653 036	3P VH connector base		1
CX038	205 0233 032	3 P EH connector base		1
CX039	205 0277 030	3P EH connector base (RD)		1
CX062	205 0343 061	6P connector base(KR-PH)		1
CX131	205 0892 088	13P FFC connector base		1
CX191	205 0892 020	12P FFC connector base		1
CX211,212	205 0892 062	21P FFC connector base		2
CY091	205 0343 090	9 P connector base (KR-PH)		1
CY092	205 0277 098	9P EH connector base (RD)		1
CY093	205 0233 090	9P EH connector base		1
FB101~111	235 0106 908	Chip emifil		11
FB112~114	247 0018 905	Carbon chip 0ohm 1/10W	RM73B--0R0K	3
FB115~146	235 0106 908	Chip emifil		32
RL301,302	214 0127 003	Relay (RY-12W)		2
ST101,102	205 0452 017	Style pin		2
X101	261 0068 003	Crystal 6.144MHz		1
	412 2160 015	Common plate		1
	412 2160 028	Common plate		2

GU-3137 DISPLAY P.W.B. UNIT ASS'Y

Ref. No.	Part No.	Part Name	Remarks
SEMICONDUCTORS GROUP			
IC601	262 2535 003	IC MN1872423***	
IC602	263 0913 905	IC PST600C	
IC603	499 0290 007	IC GP1U271X	
IC701,702	263 0995 004	IC NJM4556AD	
TR602	269 0102 905	Transistor DTC124EK	
TR681~683	269 0025 901	Transistor RN1202	
TR701~704	273 0414 906	Transistor 2SC3326(A/B)	
D601~606	276 0628 908	Diode MA152WK	
D681~683	276 0628 908	Diode MA152WK	
LD681	393 9576 903	LED SELU1E10CXM-002	
LD682	393 9453 916	LED SEL1810A	
LD683	393 9504 904	LED SEL1210S	
FL601	393 8037 003	FL tube (13-BT-155GK)	
RESISTORS GROUP			
R601,602	247 0009 985	Carbon chip 10kohm 1/10W	RM73B--103J
R603	247 0011 944	Carbon chip 47kohm 1/10W	RM73B--473J
R604	247 0018 905	Carbon chip 0ohm 1/10W	RM73B--0R0K
R605	247 0009 985	Carbon chip 10kohm 1/10W	RM73B--103J
R608,609	247 0009 985	Carbon chip 10kohm 1/10W	RM73B--103J
R610~613	247 0005 989	Carbon chip 220ohm 1/10W	RM73B--221J
R614~620	247 0011 944	Carbon chip 47kohm 1/10W	RM73B--473J
R621	247 0014 967	Carbon chip 1Mohm 1/10W	RM73B--105J
R622~627	247 0012 927	Carbon chip 100kohm 1/10W	RM73B--104J
R628~631	247 0011 944	Carbon chip 47kohm 1/10W	RM73B--473J
R638~640	247 0011 944	Carbon chip 47kohm 1/10W	RM73B--473J
R641	247 0009 985	Carbon chip 10kohm 1/10W	RM73B--103J
R681	244 2052 915	Metal oxide 1.8kohm 1W	RS14B3A182JNBS(S)
R682	244 2051 929	Metal oxide 820ohm 1W	RS14B3A821JNBS(S)
R683	244 2055 996	Metal oxide 1.2kohm 1W	RS14B3A122JNBS(S)
R701,702	247 0012 927	Carbon chip 100kohm 1/10W	RM73B--104J
R703,704	247 0007 932	Carbon chip 910ohm 1/10W	RM73B--911J
R705,706	247 0010 903	Carbon chip 12kohm 1/10W	RM73B--123J
R707,708	247 0011 944	Carbon chip 47kohm 1/10W	RM73B--473J
R709,710	244 2055 983	Metal oxide 82ohm 1W	RS14B3A820JNBS(S)
R711,712	247 0009 985	Carbon chip 10kohm 1/10W	RM73B--103J
R713,714	244 2064 990	Metal oxide 39ohm 1W	RS14B3A390JNBS(S)
R715,716	247 0009 985	Carbon chip 10kohm 1/10W	RM73B--103J
R717	244 2043 924	Metal oxide 68ohm 1W	RS14B3A680JNBS(S)
R723	247 0018 905	Carbon chip 0ohm 1/10W	RM73B--0R0K
R729	247 0018 905	Carbon chip 0ohm 1/10W	RM73B--0R0K
VR701	211 0764 001	Variable resistor 20kohm	V0920FA203

Ref. No.	Part No.	Part Name	Remarks
CAPACITORS GROUP			
C601	257 0011 996	Ceramic chip 0.1μF/25V	CK73B1E104K
C602	254 4250 916	Electrolytic 47μF/6.3V	CE04W0J470M
C603	254 4302 958	Electrolytic 47μF/10V	CE04W1A470M(SRE)
C604	254 4260 980	Electrolytic 10μF/50V	CE04W1H100M
C605	257 0011 996	Ceramic chip 0.1μF/25V	CK73B1E104K
C607	257 0011 909	Ceramic chip 0.01μF/25V	CK73B1E103K
C609	257 0011 996	Ceramic chip 0.1μF/25V	CK73B1E104K
C610	254 4250 932	Electrolytic 220μF/6.3V	CE04W0J221M
C611	257 0011 996	Ceramic chip 0.1μF/25V	CK73B1E104K
C702	254 4387 708	Electrolytic 470μF/50V	CE04W1H471M(ASF)
C703,704	254 4368 947	Electrolytic 220μF/25V	CE04W1E221M(ASF)
C705,706	257 0009 937	Ceramic chip 2700pF/50V	CK73B1H272K
C708	254 4366 703	Electrolytic 2200μF/25V	CE04W1E222M(ASF)
C709	254 4313 950	Electrolytic 100μF/50V	CE04W1H101M(ASF)
C711	257 0011 909	Ceramic chip 0.01μF/25V	CK73B1E103K
C713	257 0011 909	Ceramic chip 0.01μF/25V	CK73B1E103K

OTHER PARTS GROUP				Q'ty
CX081	205 0343 087	8P connector base(KR-PH)		1
CX091	205 0343 090	9 P connector base (KR-PH)		1
CY031	205 0581 085	2P VH connector base		1
CY062	205 0343 061	6P connector base(KR-PH)		1
CY081	205 0343 087	8P connector base(KR-PH)		1
CY191	205 0892 020	19P FFC connector base		1
CY211	205 0892 062	21P FFC connector base		1
JK701	204 8322 007	Headphone jack		1
S601~603	212 5604 907	Tact switch		3
S605,606	212 5604 907	Tact switch		2
S681	212 0389 007	Rotary switch (1-3)		1
⚠S801	212 1030 009	Power switch (TV-5)		1
W603	203 0526 060	1P contact Ass'y	L=160	1
W682	203 0301 010	1P contact Ass'y	L=220	1
W701	203 0526 002	1P contact Ass'y	L=100	1
X601	399 0195 909	EFOEC8004T4		1
	461 1015 008	FL spacer		2
	461 1015 011	FL spacer		1

GU-3138 AV/D. IN P.W.B. UNIT ASS'Y

Ref. No.	Part No.	Part Name	Remarks
SEMICONDUCTORS GROUP			
IC501	262 2533 908	IC AN3581S	
IC502	262 2534 907	IC BA7660FS	
IC503~505	262 2230 900	IC TC74HC157AF	
IC506,507	262 1205 907	IC TC74HCU04AF	
IC508	262 2580 906	IC CXA1511M	
IC804	263 1062 004	IC PQ3RD13	
IC805	263 1065 001	IC PQ15RW11	
IC806	263 0809 006	IC NJM7805FA(S)	
⚠ IC807	263 0074 904	IC ICP-N20	
IC808~810	263 1065 001	IC PQ15RW11	
IC811	263 0516 001	IC NJM7812FA	
IC812	263 0641 002	IC NJM7912FA	
TR501	273 0419 901	Transistor 2SC2295	
TR502	271 0293 901	Transistor 2SA1022	
TR504	269 0082 902	Transistor DTC114EK	
TR505,506	271 0293 901	Transistor 2SA1022	
TR507	269 0082 902	Transistor DTC114EK	
TR508	273 0411 909	Transistor 2SC2996-Y	
TR509	273 0419 901	Transistor 2SC2295	
TR510~512	274 0163 904	Transistor 2SD601A	
TR809	272 0083 004	Transistor 2SB1185(E/F)	
TR851	273 0429 904	Transistor 2SC3311A	
D501	276 0697 900	Diode MA742	
D503,504	276 0432 903	Diode 1SS270A	
D801~808	276 0553 905	Diode 1SR35-200A	
D809	276 0597 000	Diode RBA-402	
D810~816	276 0553 905	Diode 1SR35-200A	
D851	276 0432 903	Diode 1SS270A	
ZD801	276 0643 938	Zener diode MTZJ3.0A	
ZD802	276 0645 965	Zener diode MTZJ33A	
RESISTORS GROUP			
R501	247 0007 945	Carbon chip 1kohm 1/10W	RM73B--102J
R502	247 0006 988	Carbon chip 560ohm 1/10W	RM73B--561J
R503	247 0005 905	Carbon chip 100ohm 1/10W	RM73B--101J
R504	247 0009 985	Carbon chip 10kohm 1/10W	RM73B--103J
R505	247 0006 904	Carbon chip 270ohm 1/10W	RM73B--271J
R506	247 0006 962	Carbon chip 470ohm 1/10W	RM73B--471J
R507	247 0009 985	Carbon chip 10kohm 1/10W	RM73B--103J
R508	247 0006 962	Carbon chip 470ohm 1/10W	RM73B--471J
R509	247 0009 985	Carbon chip 10kohm 1/10W	RM73B--103J
R510	247 0006 962	Carbon chip 470ohm 1/10W	RM73B--471J
R511	247 0006 917	Carbon chip 300ohm 1/10W	RM73B--301J (U.S.A./Canada models)

Ref. No.	Part No.	Part Name	Remarks
R511	247 0006 904	Carbon chip 270ohm 1/10W	RM73B--271J (Asia/Taiwan R.O.C. /Europe models)
R512	247 0007 945	Carbon chip 1kohm 1/10W	RM73B--102J
R513	247 0009 998	Carbon chip 11kohm 1/10W	RM73B--113J
R514	247 0006 962	Carbon chip 470ohm 1/10W	RM73B--471J
R515	247 0009 969	Carbon chip 8.2kohm 1/10W	RM73B--822J
R516	247 0003 949	Carbon chip 22ohm 1/10W	RM73B--220J
R517	247 0005 905	Carbon chip 100ohm 1/10W	RM73B--101J
R518	247 0007 929	Carbon chip 820ohm 1/10W	RM73B--821J
R519	247 0005 989	Carbon chip 220ohm 1/10W	RM73B--221J
R520	247 0006 920	Carbon chip 330ohm 1/10W	RM73B--331J
R521	247 0006 988	Carbon chip 560ohm 1/10W	RM73B--561J
R522	247 0008 986	Carbon chip 3.9kohm 1/10W	RM73B--392J
R523	247 0008 928	Carbon chip 2.2kohm 1/10W	RM73B--222J
R524	247 0007 945	Carbon chip 1kohm 1/10W	RM73B--102J
R525	247 0010 945	Carbon chip 18kohm 1/10W	RM73B--183J
R526	247 0008 944	Carbon chip 2.7kohm 1/10W	RM73B--272J (U.S.A./Canada models)
R526	247 0008 931	Carbon chip 2.4kohm 1/10W	RM73B--242J (Asia/Taiwan R.O.C. /Europe models)
R527	247 0010 945	Carbon chip 18kohm 1/10W	RM73B--183J
R528	247 0007 987	Carbon chip 1.5kohm 1/10W	RM73B--152J
R529	247 0009 985	Carbon chip 10kohm 1/10W	RM73B--103J
R530,531	247 0006 988	Carbon chip 560ohm 1/10W	RM73B--561J
R532	247 0005 905	Carbon chip 100ohm 1/10W	RM73B--101J
R533,534	247 0009 985	Carbon chip 10kohm 1/10W	RM73B--103J
R535	247 0010 903	Carbon chip 12kohm 1/10W	RM73B--123J
R536	247 0006 920	Carbon chip 330ohm 1/10W	RM73B--331J
R537,538	247 0007 945	Carbon chip 1kohm 1/10W	RM73B--102J
R539	247 0006 962	Carbon chip 470ohm 1/10W	RM73B--471J
R540	247 0007 945	Carbon chip 1kohm 1/10W	RM73B--102J
R541,542	247 0004 977	Carbon chip 75ohm 1/10W	RM73B--750J
R543	247 0010 903	Carbon chip 12kohm 1/10W	RM73B--123J
R544	247 0005 905	Carbon chip 100ohm 1/10W	RM73B--101J
R545	247 0006 920	Carbon chip 330ohm 1/10W	RM73B--331J
R546~548	247 0004 977	Carbon chip 75ohm 1/10W	RM73B--750J
R549	247 0004 964	Carbon chip 68ohm 1/10W	RM73B--680J
R550	247 0018 905	Carbon chip 0ohm 1/10W	RM73B--0R0K
R551,552	247 0010 961	Carbon chip 22kohm 1/10W	RM73B--223J
R553	247 0004 977	Carbon chip 75ohm 1/10W	RM73B--750J
R554	247 0009 985	Carbon chip 10kohm 1/10W	RM73B--103J
R555	247 0004 964	Carbon chip 68ohm 1/10W	RM73B--680J
R556	247 0004 977	Carbon chip 75ohm 1/10W	RM73B--750J
R557	247 0011 944	Carbon chip 47kohm 1/10W	RM73B--473J
R558	247 0018 905	Carbon chip 0ohm 1/10W	RM73B--0R0K
R559	247 0007 945	Carbon chip 1kohm 1/10W	RM73B--102J
R560	247 0011 944	Carbon chip 47kohm 1/10W	RM73B--473J
R561	247 8005 989	Carbon chip 220ohm 1/10W	RM73B--221J
R562	247 0011 944	Carbon chip 47kohm 1/10W	RM73B--473J
R563	247 0006 962	Carbon chip 470ohm 1/10W	RM73B--471J
R564	247 0018 905	Carbon chip 0ohm 1/10W	RM73B--0R0K

Ref. No.	Part No.	Part Name	Remarks
R565,566	247 0006 962	Carbon chip 470ohm 1/10W	RM73B–471J
R567	247 0018 905	Carbon chip 0ohm 1/10W	RM73B–0R0K
R570	247 0011 944	Carbon chip 47kohm 1/10W	RM73B–473J
R571	247 0011 928	Carbon chip 39kohm 1/10W	RM73B–393J
R572	247 0007 945	Carbon chip 1kohm 1/10W	RM73B–102J
R573	247 0011 944	Carbon chip 47kohm 1/10W	RM73B–473J
R574	247 0018 905	Carbon chip 0ohm 1/10W	RM73B–0R0K
R575	247 0013 942	Carbon chip 330kohm 1/10W	RM73B–334J
R576	247 0011 944	Carbon chip 47kohm 1/10W	RM73B–473J
R577	247 0018 905	Carbon chip 0ohm 1/10W	RM73B–0R0K
R578	247 0006 962	Carbon chip 470kohm 1/10W	RM73B–471J
R579	247 0006 962	Carbon chip 470ohm 1/10W	RM73B–471J
R580,581	247 0018 905	Carbon chip 0ohm 1/10W	RM73B–0R0K
R582,583	247 0004 977	Carbon chip 75ohm 1/10W	RM73B–750J
R587	247 0006 962	Carbon chip 470ohm 1/10W	RM73B–471J
R588	247 0012 998	Carbon chip 200kohm 1/10W	RM73B–204J
R590	244 2052 928	Metal oxide 47ohm 1W	RS14B3A470JNBS(S)
R591	247 0018 905	Carbon chip 0ohm 1/10W	RM73B–0R0K
R593	247 0018 905	Carbon chip 0ohm 1/10W	RM73B–0R0K
R596, 598	247 0007 945	Carbon chip 1kohm 1/10W	RM73B–102J
CAPACITORS GROUP			
C501	254 4254 941	Electrolytic 100µF/16V	CE04W1C101M
C502,503	257 0011 909	Ceramic chip 0.01µF/25V	CK73B1E103K
C504	257 0002 963	Ceramic chip 15pF/50V	CC73SL1H150J
C505	254 4250 958	Electrolytic 470µF/6.3V	CE04W0J471M
C506	254 4254 941	Electrolytic 100µF/16V	CE04W1C101M
C507	257 0011 909	Ceramic chip 0.01µF/25V	CK73B1E103K
C508	257 0003 946	Ceramic chip 33pF/50V	CC73SL1H330J
C509	254 4260 951	Electrolytic 2.2µF/50V	CE04W1H2R2M
C510	257 0004 945	Ceramic chip 82pF/50V	CC73SL1H820J
C511	254 4260 948	Electrolytic 1µF/50V	CE04W1H010M
C512	257 0011 909	Ceramic chip 0.01µF/25V	CK73B1E103K
C513	254 4254 925	Electrolytic 33µF/16V	CE04W1C330M
C514	257 0006 969	Ceramic chip 680pF/50V	CC73SL1H681J
C515	257 0001 993	Ceramic chip 7pF/50V	CC73SL1H7R0DJ (U.S.A./Canada models)
C515	257 0002 947	Ceramic chip 12pF/50V	CC73SL1H120J (Asia/Taiwan R.O.C. /Europe models)
C516	257 0011 909	Ceramic chip 0.01µF/25V	CK73B1E103K
C517	254 4254 941	Electrolytic 100µF/16V	CE04W1C101M
C518~519	257 0011 909	Ceramic chip 0.01µF/25V	CK73B1E103K
C520	254 4254 938	Electrolytic 47µF/16V	CE04W1C470M
C522	257 0011 909	Ceramic chip 0.01µF/25V	CK73B1E103K
C523	254 4254 941	Electrolytic 100µF/16V	CE04W1C101M
C524~526	257 0011 909	Ceramic chip 0.01µF/25V	CK73B1E103K
C527	257 0002 963	Ceramic chip 15pF/50V	CC73SL1H150J
C528	257 0011 909	Ceramic chip 0.01µF/25V	CK73B1E103K
C529	254 4254 912	Electrolytic 22µF/16V	CE04W1C220M
C530	254 4250 767	Electrolytic 1000µF/6.3V	CE04W0J102M

Ref. No.	Part No.	Part Name	Remarks
C531	254 4254 912	Electrolytic 22µF/16V	CE04W1C220M
C532	254 4250 767	Electrolytic 1000µF/6.3V	CE04W0J102M
C533	257 0011 909	Ceramic chip 0.01µF/25V	CK73B1E103K
C534	254 4252 943	Electrolytic 220µF/10V	CE04W1A221M
C535	257 0002 963	Ceramic chip 15pF/50V	CC73SL1H150J
C536,537	257 0011 909	Ceramic chip 0.01µF/25V	CK73B1E103K
C538	254 4254 954	Electrolytic 220µF/16V	CE04W1C221M
C539	257 0011 909	Ceramic chip 0.01µF/25V	CK73B1E103K
C540	254 4250 932	Electrolytic 220µF/6.3V	CE04W0J221M
C541	254 4302 932	Electrolytic 22µF/10V	CE04W1A220M(SRE)
C542	254 4250 932	Electrolytic 220µF/6.3V	CE04W0J221M
C543	254 4302 932	Electrolytic 22µF/10V	CE04W1A220M(SRE)
C544,545	247 0018 905	Carbon chip 0ohm 1/10W	RM73B–0R0K
C546,547	257 0011 909	Ceramic chip 0.01µF/25V	CK73B1E103K
C549	257 0011 996	Ceramic chip 0.1µF/25V	CK73B1E104K
C550	257 0007 900	Ceramic chip 1000pF/50V	CC73SL1H102J
C551~554	257 0011 909	Ceramic chip 0.01µF/25V	CK73B1E103K
C555	257 0007 900	Ceramic chip 1000pF/50V	CC73SL1H102J
C556	257 0011 909	Ceramic chip 0.01µF/25V	CK73B1E103K
C557	257 0007 900	Ceramic chip 1000pF/50V	CC73SL1H102J
C558,559	257 0011 909	Ceramic chip 0.01µF/25V	CK73B1E103K
C560	257 0005 902	Ceramic chip 150pF/50V	CC73SL1H151J
C561	257 0007 900	Ceramic chip 1000pF/50V	CC73SL1H102J
C562	257 0011 909	Ceramic chip 0.01µF/25V	CK73B1E103K
C563	254 4313 989	Electrolytic 33µF/50V	CE04W1H330M(ASF)
C564	254 4313 918	Electrolytic 10µF/50V	CE04W1H100M(ASF)
C565,566	257 0011 909	Ceramic chip 0.01µF/25V	CK73B1E103K
C567	257 0003 988	Ceramic chip 47pF/50V	CC73SL1H470J
C568	254 4313 918	Electrolytic 10µF/50V	CE04W1H100M(ASF)
C569	257 0011 909	Ceramic chip 0.01µF/25V	CK73B1E103K
C570	257 0011 996	Ceramic chip 0.1µF/25V	CK73B1E104K
C571	257 0011 909	Ceramic chip 0.01µF/25V	CK73B1E103K
C573	257 0011 909	Ceramic chip 0.01µF/25V	CK73B1E103K
C574	257 0007 900	Ceramic chip 1000pF/50V	CC73SL1H102J
C575	257 0011 909	Ceramic chip 0.01µF/25V	CK73B1E103K
C576	257 0007 900	Ceramic chip 1000pF/50V	CC73SL1H102J
C577	257 0011 909	Ceramic chip 0.01µF/25V	CK73B1E103K
C578,579	257 0007 900	Ceramic chip 100pF/50V	CC73SL1H102J
C580,581	257 0011 909	Ceramic chip 0.01µF/25V	CK73B1E103K
C582	257 0004 961	Ceramic chip 100pF/50V	CC73SL1H101JT
C583	257 0011 909	Ceramic chip 0.01µF/25V	CK73B1E103K
C585	254 4305 968	Electrolytic 1µF/50V	CE04W1H010M(SRE)
C586	254 4254 938	Electrolytic 47µF/16V	CE04W1C470M
C587	257 0011 909	Ceramic chip 0.01µF/25V	CK73B1E103K
C807	257 0010 900	Ceramic chip 0.01µF/50V	CK73B1H103K
C808	254 4302 974	Electrolytic 100µF/10V	CE04W1A101M(SRE)
C809	254 4260 980	Electrolytic 10µF/50V	CE04W1H100M
C816	257 0010 900	Ceramic chip 0.01µF/50V	CK73B1H103K
C817	254 4302 974	Electrolytic 100µF/10V	CE04W1A101M(SRE)
C818	255 4235 934	Polypropylene film 0.01µF/100V	CQ93P2A103J(NH)
C819	254 4254 941	Electrolytic 100µF/16V	CE04W1C101M

Ref. No.	Part No.	Part Name	Remarks
C820	254 4262 946	Electrolytic 47µF/63V	CE04W1J470M
C821,822	254 4261 905	Electrolytic 33µF/50V	CE04W1H330M
C823,824	257 0010 900	Ceramic chip 0.01µF/50V	CK73B1H103K
C825	254 4256 790	Electrolytic 2200µF/25V	CE04W1E222M
C826,827	257 0010 900	Ceramic chip 0.01µF/50V	CK73B1H103K
C828	255 4235 934	Polypropylene film 0.01µF/100V	CQ93P2A103J(NH)
C829	254 4532 702	Electrolytic 22000µF/10V	CE04W1A223M(SMG)
C830	254 4256 787	Electrolytic 1000µF/25V	CE04W1E102M
C831~834	257 0010 900	Ceramic chip 0.01µF/50V	CK73B1H103K
C835~838	253 1181 904	Ceramic 0.01µF/50V	CK45F1H103Z
C839	257 0010 900	Ceramic chip 0.01µF/50V	CK73B1H103K
C840	254 4302 974	Electrolytic 100µF/10V	CE04W1A101M(SRE)
C841	257 0010 900	Ceramic chip 0.01µF/50V	CK73B1H103K
C842	254 4302 974	Electrolytic 100µF/10V	CE04W1A101M(SRE)
C843	257 0010 900	Ceramic chip 0.01µF/50V	CK73B1H103K
C844	254 4302 974	Electrolytic 100µF/10V	CE04W1A101M(SRE)
C851	253 8014 702	Ceramic 0.01µF/400V(AC)	CK45F2GAC103MC
C856	255 4235 934	Polypropylene film 0.01µF/100V	CQ93P2A103J(NH)
C861~864	254 4305 968	Electrolytic 1µF/50V	CE04W1H010M(SRE)
C865~868	254 4461 718	Electrolytic 4.7µF/50V	CE04W1H4R7M(ARS)
OTHER PARTS GROUP			**Q'ty**
BF501	261 0153 002	Filter	ELB4H079A 1
BF502	261 0154 001	Filter	ELB4K164A 1
BF503	261 0155 000	Filter	ELB4L182A 1
CW037	203 4741 003	3P EH-SCN connector cord	L=110 1
CX031	205 0581 085	2P VH connector base	1
CX032	205 0581 056	2P VH connector base	1
CX034	205 0278 039	3P EH connector base (BK)	1
CX035	205 1093 006	2P VH connector base	1
CX036	205 0581 069	2P VH-VH connector base	1
CX037	205 0233 032	3P EH connector base	1
CX041	205 0277 043	4P EH connector base (RD)	1
CX042	205 0233 045	4P EH connector base	1
CX043	205 0278 042	4P EH connector base (BK)	1
CX053	205 0355 059	5P KR connector base (L)	1
CX082	205 0343 087	8P connector base(KR-PH)	1
CX083	205 0278 084	8P EH connector base (BK)	1
CX092	205 0277 098	9P EH connector base (RD)	1
CX093	205 0234 099	9P EH SID connector base	1
CX221	205 0892 091	22P FFC connector base	1
CY034	205 0278 039	3P EH connector base (BK)	1
CY038	205 0233 032	3 P EH connector base	1
CY039	205 0277 030	3P EH connector base (RD)	1
CY041	205 0277 043	4P EH connector base (RD)	1
CY083	205 0278 084	8P EH connector base (BK)	1
⚠F801	206 1039 050	Fuse 1.8AT	U.S.A./Canada models 1

Ref. No.	Part No.	Part Name	Remarks	Q'ty
⚠F801	206 1015 056	Fuse 1.6A (T)	(Asia/Taiwan R.O.C. /Europe models)	1
⚠F802	206 1046 027	Fuse 5A	U.S.A./Canada models	1
⚠F802	206 1015 090	Fuse 5A (T)	(Asia/Taiwan R.O.C. /Europe models)	1
FB501~505	235 0049 900	Beads inductor		5
FB507~510	235 0049 900	Beads inductor		4
FF801,802	202 0040 909	Fuse clip		2
FH801,802	202 0040 909	Fuse clip		2
JK501,502	204 8417 006	1P pin jack (S-GND)		2
JK503	269 0172 003	GP1F37R		1
JK504	269 0098 006	GP1F32T (OPT. OUT)		1
JK505,506	204 8260 004	Mini jack		2
JK507	203 8494 000	2P pin jack		1
JK508	204 8572 006	1P pin jack (G)		1
JK509	205 1089 007	S-terminal		1
JK510	204 8573 005	2P pin jack (R,B)		1
L501,502	235 0070 911	Inductor 22µH		2
L503	235 0074 975	Inductor 8.2µH		1
L504~506	235 0070 911	Inductor 22µH		3
L851	239 8019 002	Line filter coil		1
RL851	214 0142 004	Relay (TV-5)		1
T501	231 8063 009	Pulse trans.		1
⚠T851	233 6268 006	Power trans. mini E3	U.S.A./Canada models	1
⚠T851	233 6269 005	Power trans. mini E2	Europe model only	1
⚠T851	233 6270 007	Power trans. mini E1	Asia/Taiwan R.O.C. models	1
TM501,502	205 1034 007	M3 Screw terminal		2
TM801	205 1034 007	M3 Screw terminal		1
⚠S851	212 1118 002	Voltage selector	Asia/Taiwan R.O.C. models	1
	205 0452 017	Style pin		4
	417 0572 008	Sub radiator		1
	417 0574 006	Sub radiator (A)		1
	417 0575 005	Sub radiator (B)		1
	471 3304 028	Screw 3X8 CBS-B		8
	513 2492 060	Fuse label for F801	U.S.A./Canada models	1
	513 3240 033	Fuse label for F801	(Asia/Taiwan R.O.C. /Europe models)	1
	513 2492 073	Fuse label for F802	U.S.A./Canada models	1
	513 3240 020	Fuse label for F802	(Asia/Taiwan R.O.C. /Europe models)	1

EXPLODED VIEW

WARNING:
Parts marked with this symbol ⚠ ▨ have critical characteristics.
Use ONLY replacement parts recommended by the manufacturer.

Asia/Taiwan R.O.C. model only

PARTS LIST OF EXPLODED VIEW

* As for "Note" in Part No., refer to ADDENDUM PARTS LIST on page 41.

Ref. No.	Part No.	Part Name	Remarks	Q'ty
◉ 1	Note	Display P.W.B. unit Ass'y		1
1-1	GU-3137-1	Display unit		(1)
1-2	GU-3137-2	Power switch unit		(1)
1-3	GU-3137-3	Headphone unit		(1)
1-4	GU-3137-4	LED/switch unit		(1)
◉ 2	Note	AV/D.IN P.W.B. unit Ass'y		1
2-1	GU-3138-1	Video unit		(1)
2-2	GU-3138-2	Didital I/O unit		(1)
2-3	GU-3138-3	Power unit		(1)
2-4	GU-3138-4	Secondary unit (1)		(1)
2-5	GU-3138-5	Secondary unit (2)		(1)
2-6	GU-3138-6	Voltage unit	Asia/Taiwan R.O.C. models	(1)
◉ 3	GU-3141	Audio I/F P.W.B. unit Ass'y		1
3-1	GU-3141-1	Audio I/F unit		(1)
4	411 1387 003	Chassis		1
5	411 1318 111	Front angel		1
6	Note	Rear panel		1
7	204 9801 006	1P pin jack		2
★ 8	203 5207 009	3P VH connector cord	L=60	1
★ 9	203 5025 016	3P VH connector cord	L=60	1
⚠ 10	Note	AC inlet		1
★ 11	Note	3P VH connector cord	CX032	1
12	417 0573 007	Radiator		1
13	Note	Radiator cover		1
★ 14	203 6472 024	4P EH-EH connector cord	L=80 CY041	1
★ 15	203 5134 033	3P EH-EH connector cord	L=150 CX039	1
★ 16	203 5134 004	3P EH-EH connector cord	L=150 CX038	1
★ 17	204 2841 005	8P EH-EH connector cord	L=80 CY083	1
★ 18	203 5091 008	3P EH-EH connector cord	L=200 CY034	1
19	105 1295 106	Inside bottom		1
20	105 1295 119	Inside bottom		1
21	105 1297 104	Bottom cover		1
22	104 0296 006	Foot Ass'y		4
◉ 23	441 1886 000	Mecha fix bracket		1
24	461 0330 069	Rubber cushion		2
◉ 25	443 0518 016	P.W.B. holder		4
26	412 2814 015	Card spacer (L=14)		2
★ 27	204 2837 019	9P EH-EH connector cord	L=500 CX092	1
★ 28	204 2787 004	8P PH-PH connector cord	L=170 CN082	1
29	415 0597 032	Card spacer (H=19.1)		2
30	449 0033 007	Locking card spacer		2
⚠ 31	Note	Power trans. (DIGITAL)		1
⚠ 32	Note	Power trans. (AUDIO)		1
★ 33	513 1606 006	Power trans label (A)		1
★ 34	513 1607 005	Power trans label (B)		1
★ 35	342 0020 007	Ferrite core		1
36	129 0213 004	Trans damper		2
37	412 3957 007	Trans plate		2
★ 38	445 8004 007	Wire clamper		4
◉ 39	441 1887 106	P.W.B. bracket		1
40	449 0050 080	Card spacer		2
41	Note	Main unit Ass'y		1
★ 42	203 8496 008	5P shield connector cord		1
★ 43	204 2836 010	9P EH-EH shield cord	L=450 CX093	1
★ 44	009 0160 057	21P FFC (1.0)	L=250	1
★ 45	009 0160 031	22P FFC (1.0)		1
46	461 1014 009	Mecha damper		2
47	337 0061 006	DVD drive mecha unit		1
48	431 0418 003	Tray		1
★ 49	009 0160 044	35P FFC (1.0)		1
★ 50	009 0160 002	5P FFC (1.0)		1
◉ 51	445 0048 016	Cord holder	L=50	1
◉ 52	412 4429 000	Support bracket		1
◉ 53	414 0849 004	Top plate		1
54	129 0215 002	Bass rubber(S)		1
55	412 2814 002	Card spacer (L=8)		5
56	449 0152 001	Locking wire saddle		3
★ 57	009 0154 018	13P FFC (1.0)		1
◉ 58	Note	Front panel Ass'y		1
59	Note	OP/CL knob Ass'y		1
60	Note	Function knob Ass'y		1
★ 61	009 0160 015	19P FFC (1.0)		1
★ 62	009 0160 028	21P FFC (1.0)		1
★ 63	204 0317 010	6P PH-PH connector cord	L=200 CY062	1
★ 64	204 2570 004	8P PH connector cord (WHT)	L=150	1
★ 65	203 5132 051	3P VH-VH connector cord	L=220	1
66	Note	Power knob Ass'y		1
◉ 67	412 4392 001	Headphone bracket		1
68	Note	H/P VR knob Ass'y		2
★ 69	204 2842 004	9P PH-PH connector cord	L=400 CN091	1
◉ 71	129 0140 151	Rubber sheet		2
◉ 72	Note	Loader panel Ass'y		1
73	Note	Top cover		1
74	441 1709 103	Top cover damper		1
⚠ 75	Note	Fuse	F801	1
⚠ 76	Note	Fuse	F802	1
★ 77	513 3233 008	C-UL MARK US (1409)	U.S.A./Canada models	1
★ 78	513 1220 000	Caution label	U.S.A./Canada models	1
★ 79	513 3230 001	Caution label	U.S.A./Canada models	1

SCREWS & NUTS

101	471 3304 028	Screw 3X8 CBS-B		2
102	Note	Special screw		10
103	473 7006 027	Screw 3X10 CBTS (S)-B		24
104	473 7007 026	Screw 4X16 CBTS(S)-B		4
105	473 7518 104	Screw 3X10 CBTS (P)-CU		24
106	473 8007 009	Cup screw 3X12		4
107	473 8007 025	Cup screw 3X8		4
108	473 8034 001	Screw 3X8 CBTS (B)-CU		54
109	473 7006 030	Screw 3X12 CBTS (S)-B		4
110	473 8061 003	Screw 3X8 CBTS (B)-CU		12
111	471 3832 008	Screw 3X8 CBS-CU		3

* As for "Note" in Part No., refer to ADDENDUM PARTS LIST below.

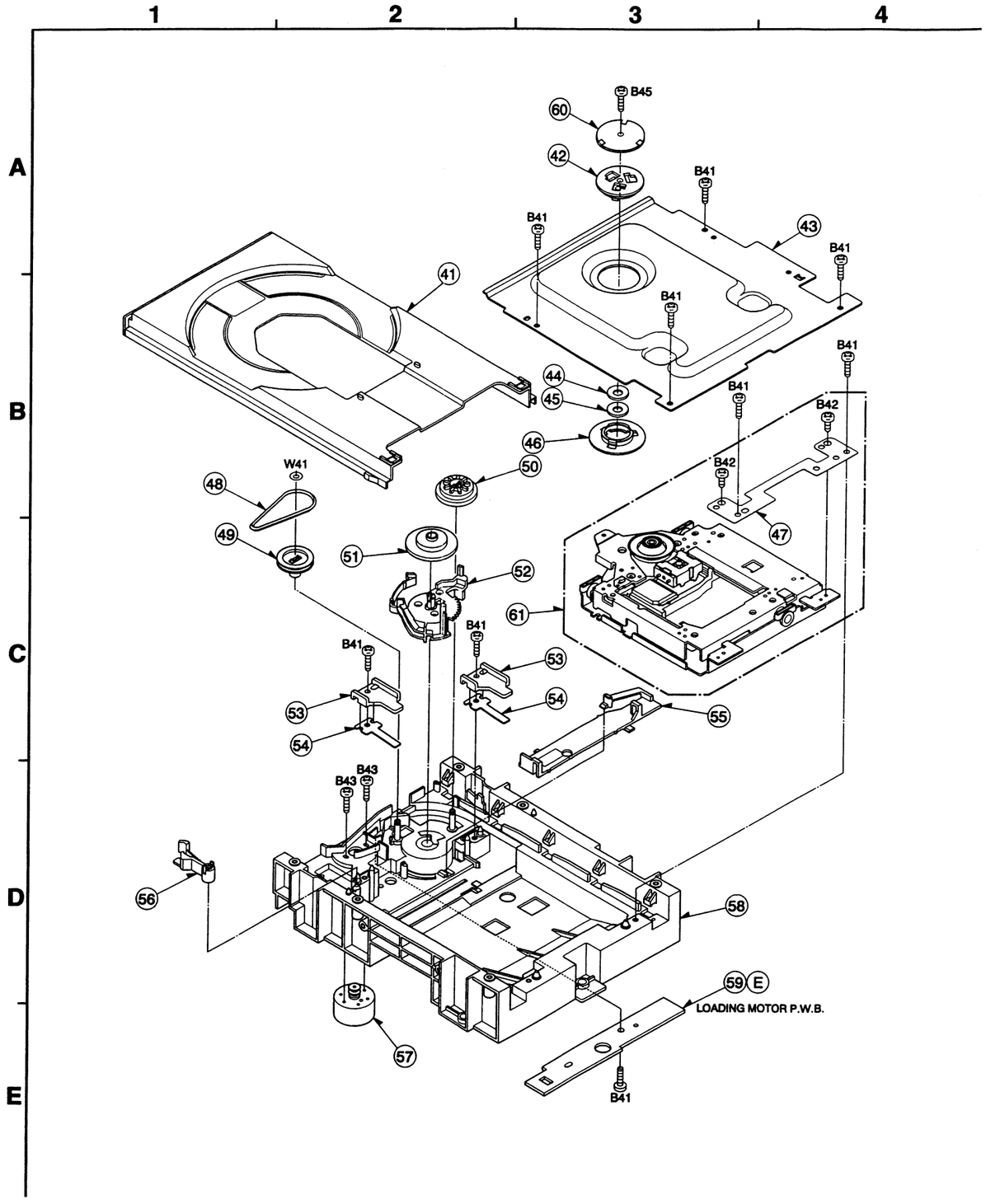
Ref. No.	Part No.	Part Name	Remarks	Q'ty
PACKING & ACCESSORIES (Not included EXPLODED VIEW.)				
◉ 201	Note	Rating sheet		1
◉ 202	505 0131 076	Cabinet cover		1
◉ 203	503 1314 003	Cushion Ass'y		1
◉ 204	Note	Carton case		1
◉ 205	505 0038 030	Poly. cover		1
◉ 206	Note	Instruction manual		1
◉ 207	515 0671 601	S.S. list (EX)		1
208	203 5206 000	1P pin cord (VIDEO)		1
209	204 8121 004	2P pin cord		1
210	399 0506 006	Remocon RC-540		1
211	—	Battery UM-3		1
⚠ 212	Note	AC cord		1
◉ 213	513 1389 006	Control card		1
◉ 215	Note	Color label (gold)		2
◉ 216	517 1375 009	UPC label	U.S.A./Canada models	1
◉ 217	515 0690 307	DEL warranty home	U.S.A./Canada models	1
◉ 218	513 3224 004	KOLIN label	Taiwan R.O.C. model only	1
◉ 219	517 1381 006	E2 POS label	Europe model only	1

ADDENDUM PARTS LIST

PARTS LIST OF EXPLODED VIEW

Ref. No.	Part Name	Part No. U.S.A/Canada Black model	Part No. Europe Gold model	Part No. Asia Gold model	Part No. Taiwan R.O.C. Gold model
1	Display P.W.B. unit Ass'y	GU-3137	GU-3137B	GU-3137D	GU-3137D
2	AV/D.IN P.W.B. unit Ass'y	GU-3138	GU-3138B	GU-3138C	GU-3138C
6	Rear panel	105 1294 107	105 1294 123	105 1294 136	105 1294 136
⚠ 10	AC inlet	203 3962 003	203 3970 008	203 3970 008	203 3962 003
11	3P VH connector cord	203 5183 000	203 5159 050	203 5159 047	203 5159 047
13	Radiator cover	412 4460 001	412 4460 027	412 4460 027	412 4460 014
⚠ 31	Power trans. (DIGITAL)	233 6263 108	233 6261 003	233 6259 002	233 6259 002
⚠ 32	Power trans. (AUDIO)	233 6264 000	233 6262 002	233 6260 004	233 6260 004
41	Main unit Ass'y	221 2109 001	221 2110 003	221 2110 003	221 2110 003
58	Front panel Ass'y	144 2621 101	144 2621 127	144 2621 114	144 2621 114
59	OP/CL knob Ass'y	113 1821 018	113 1821 005	113 1821 005	113 1821 005
60	Function knob Ass'y	113 1822 017	113 1822 004	113 1822 004	113 1822 004
66	Power knob Ass'y	113 9303 114	113 9303 101	113 9303 101	113 9303 101
68	H/P VR knob Ass'y	113 1713 113	113 1713 100	113 1713 100	113 1713 100
72	Loader panel Ass'y	146 2110 003	146 2110 016	146 2110 016	146 2110 016
73	Top cover	102 0593 004	102 0593 017	102 0593 017	102 0593 017
⚠ 75	Fuse 1.6AT (F801)	206 1039 050	206 1015 058	206 1015 058	206 1015 058
⚠ 76	Fuse 5A (F802)	206 1046 027	206 1015 090	206 1015 090	206 1015 090
102	Special screw	477 0263 005	471 9043 008	471 9043 008	471 9043 008
PACKING AND ACCESSORIES					
◉ 201	Rating sheet	513 3194 008	513 3203 009	513 3204 008	513 3223 005
◉ 204	Carton case	501 2021 001	501 2021 027	501 2021 030	501 2021 030
◉ 206	Instruction manual	511 3330 002	511 3353 005	511 3354 004	511 3354 004
⚠ 212	AC cord	206 2157 009	206 2147 006	206 2147 006	206 2157 009
◉ 215	Color label (gold)	—	513 9111 001	513 9111 001	513 9111 001

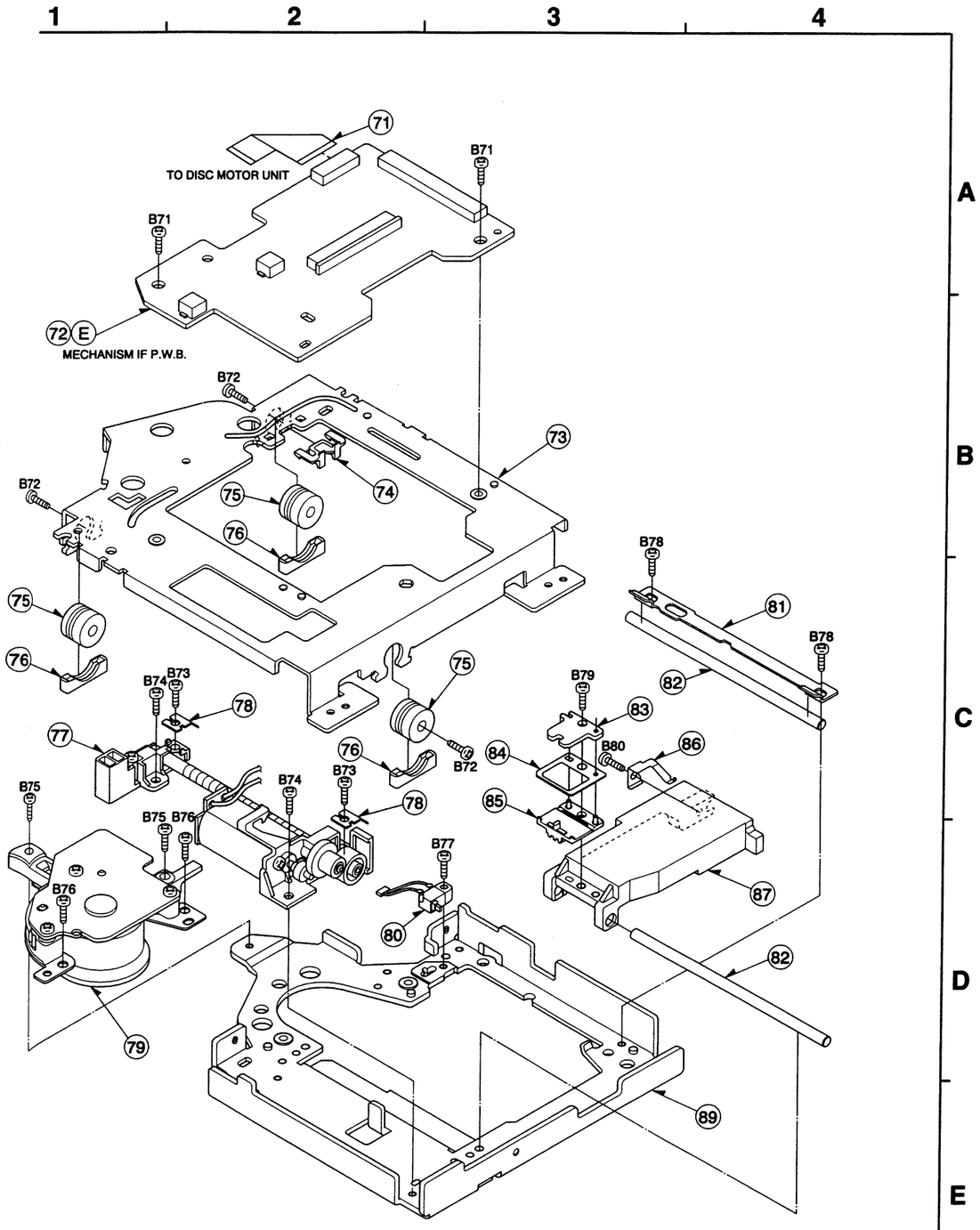
EXPLODED VIEW OF Loading Mechanism Section



Loading Mechanism Section Parts List

Ref. No.	Part No.	Part Name	Remarks	Q'ty
41	431 0419 002	Tray		1
42	9MV MD26 40	Clamper holder	VMD2640	1
43	9MV MA95 34	Clamper plate	VMA9534	1
44	9MV MA95 35	Clamper back yoke	VMA9535	1
45	9MV SQ10 02	Clamper magnet	VSQ1002	1
46	9MV MD26 39	Clamper	VMD2639	1
47	9MV MC12 64	Support spring	VMC1264	1
48	9MV DV03 73	Square belt	VDV0373	1
49	9MV DG12 29	Pulley gear	VDG1229	1
50	9MV DG12 31	Tray gear	VDG1231	1
51	9MV DG12 27	Rotation gear	VDG1227	1
52	9MV DK01 50	Rotary cam	VDK0150	1
53	9MV MA95 72	Chassis stopper	VMA9572	2
54	9MV MC12 67	Chassis holder	VMC1267	2
55	9MV MD26 41	Slider	VMD2641	1
56	9MV MD26 42	Switch lever	VMD2642	1
57	9MV EM06 09	Loading motor unit	VEM0609	1
58	9MV MD26 83	Loading base	VMD2683	1
59	9MV EK80 01	Loading motor P.W.B.	VEK8001	1
60	9MV MA96 95	Clamper weight	VMA9695	1
61	9MV XK13 63	Traverse unit	VXK1363	1
B41	928 0067 819	Screw	XTV26+8G	9
B42	928 0067 806	Screw	XYC26+BF5FZN	2
B43	928 0067 822	Screw	XQNQC17+3	2
B45	928 0067 848	Screw	XTS26+6J	1
W41	9MV MX26 41	Washer	VMX2641	1

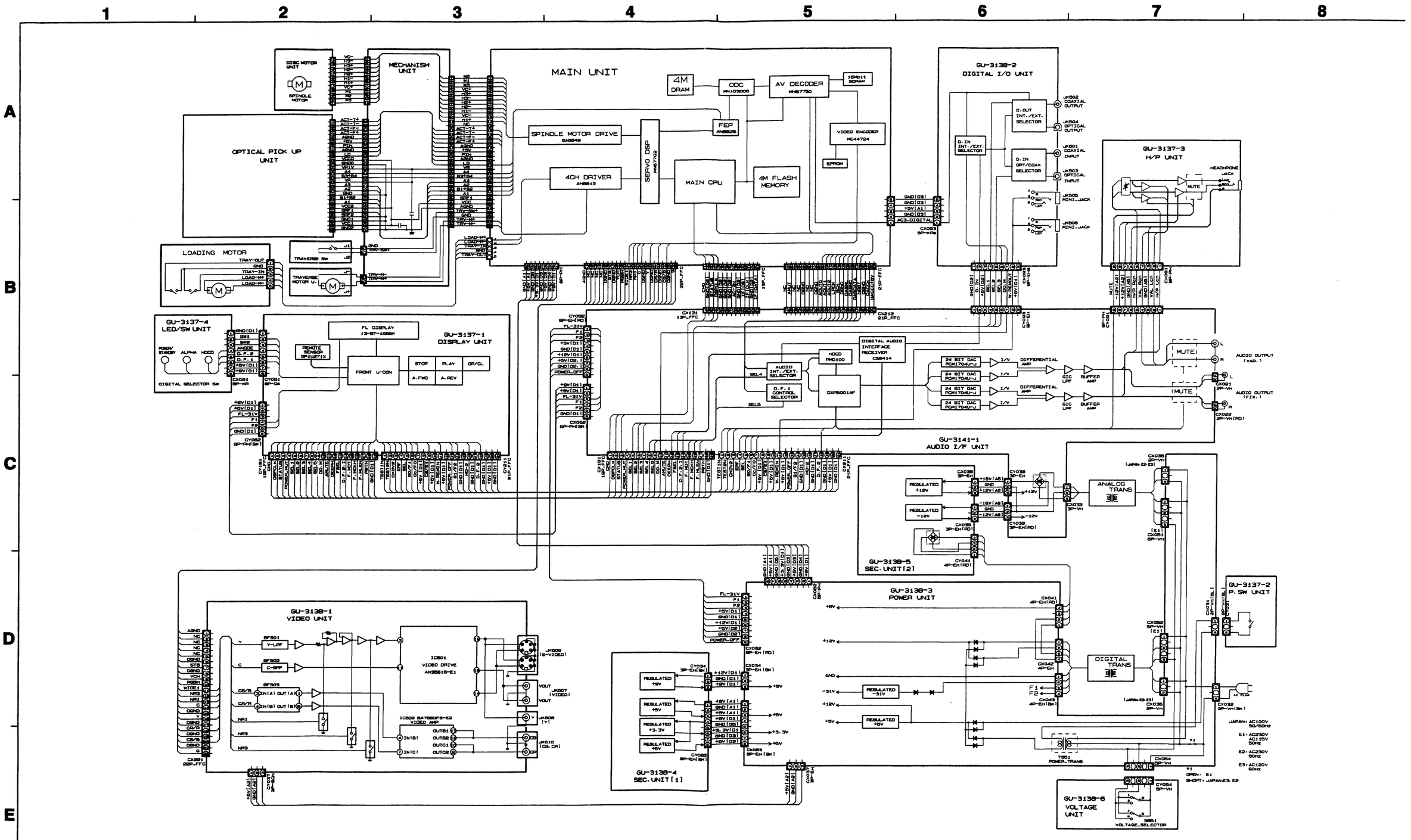
EXPLODED VIEW OF Traverse Section



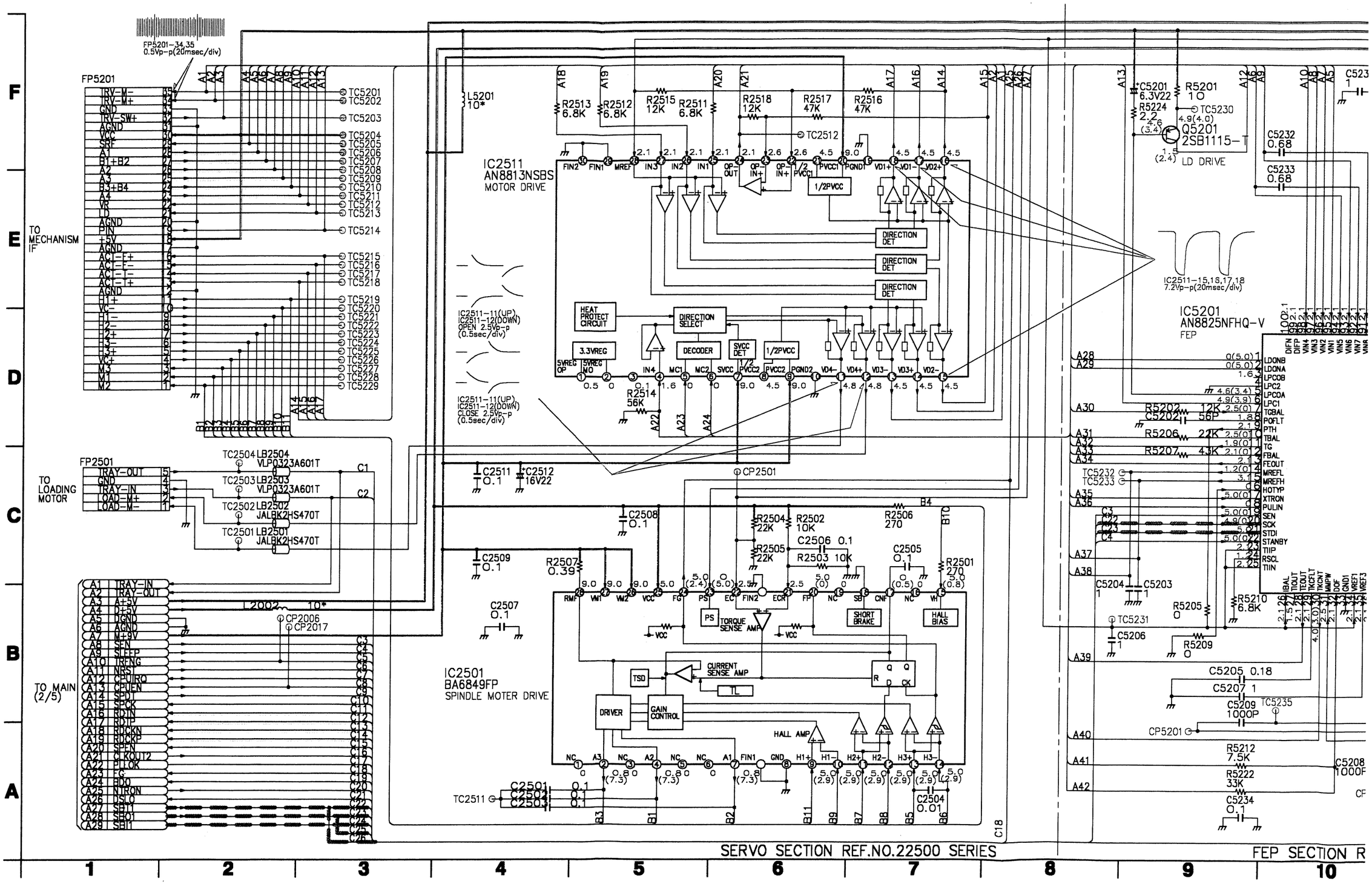
Traverse Section Parts List

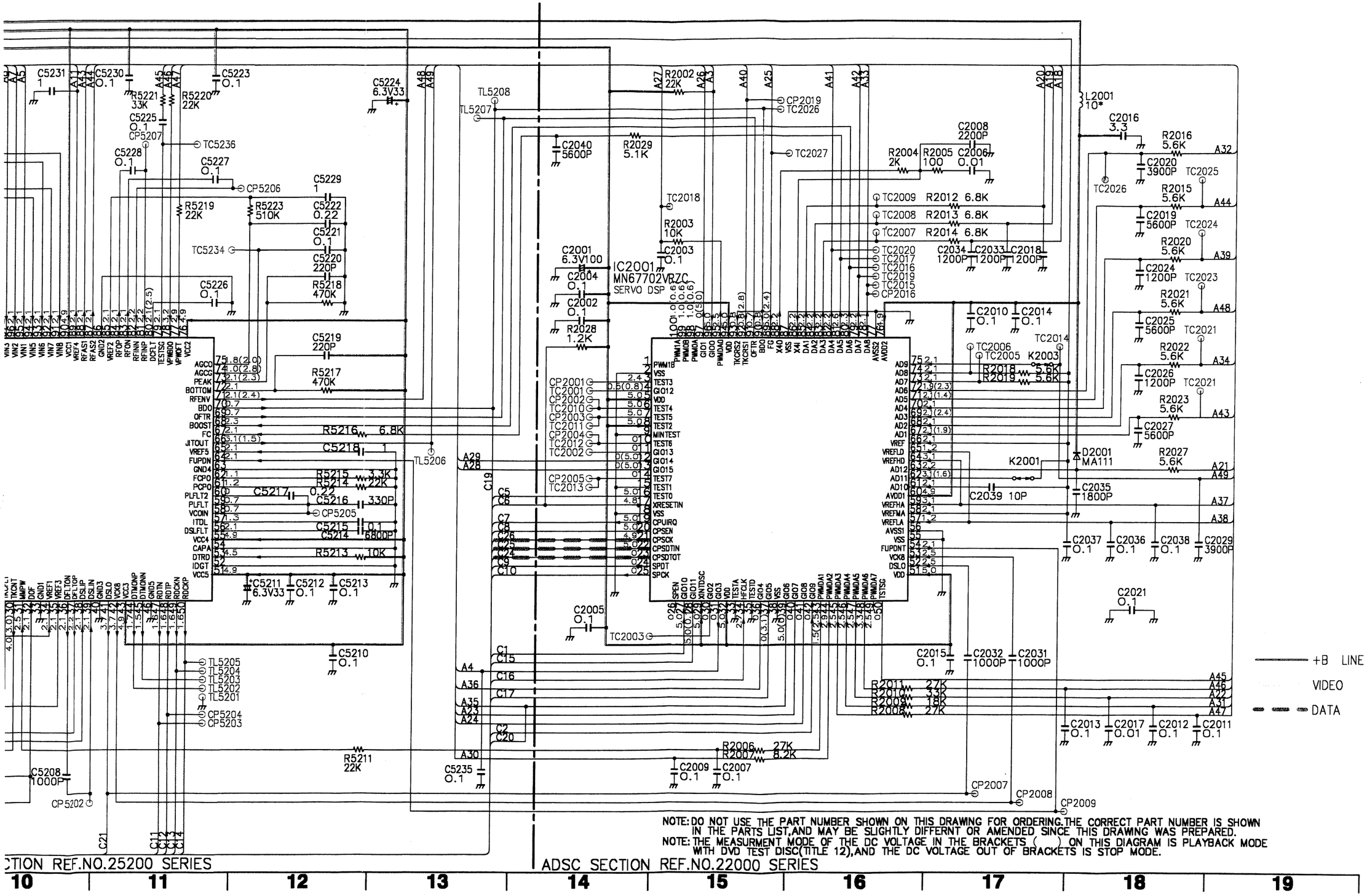
Ref. No.	Part No.	Part Name	Remarks	Q'ty
71	9MV WJ11 16	11P Flexible cable	VWJ1116	1
72	928 0090 608	Mechanism IF P.W.B.	VEP90367A	1
73	9MV XA57 86	D Chassis unit	VXA5786	1
74	9MV MD26 82	Switch clamper	VMD2682	1
75	9MV MG10 01	Damper	VMG1001	3
76	9MV MD26 75	Damper holder	VMD2675	3
77	9MV XQ05 88	Traverse motor unit	VXQ0588	1
78	9MV MC12 62	Main shaft holder	VMC1262	2
79	9MV XA60 65	Disk motor unit	VXA6065	1
80	9MV EK80 61	Tip switch unit	VEK8061	1
81	9MV MC12 60	Sub shaft holder	VMC1260	1
82	9MV MS60 98	Guide shaft	VMS6098	2
83	9MV MA95 32	Nut stopper	VMA9532	1
84	9MV MC12 63	Nut hold spring	VMC1263	1
85	9MV MD26 37	Screw nut	VMD2637	1
86	9MV MC12 65	PU over pressure spring	VMC1265	1
87	9MV ED03 78	Optical pick up unit	VED0378	1
89	9MV MK04 33	H Chassis	VMK0433	1
B71	928 0068 009	Screw	XTB26+5F	2
B72	9MV HD10 32	Screw	VHD1032	3
B73	928 0068 012	Screw	XYC2+JF10	2
B74	928 0068 025	Screw	XYN2+J4	2
B75	928 0068 038	Screw	XVE26B10FP	2
B76	928 0068 041	Screw	XYC2+JF5	2
B77	928 0068 054	Screw	XYN2+J8	1
B78	928 0068 067	Screw	XSN2+3	2
B79	928 0068 070	Screw	XQN17+C5	1
B80	9MV HD10 57	Screw	VHD1057	1

WIRING DIAGRAM

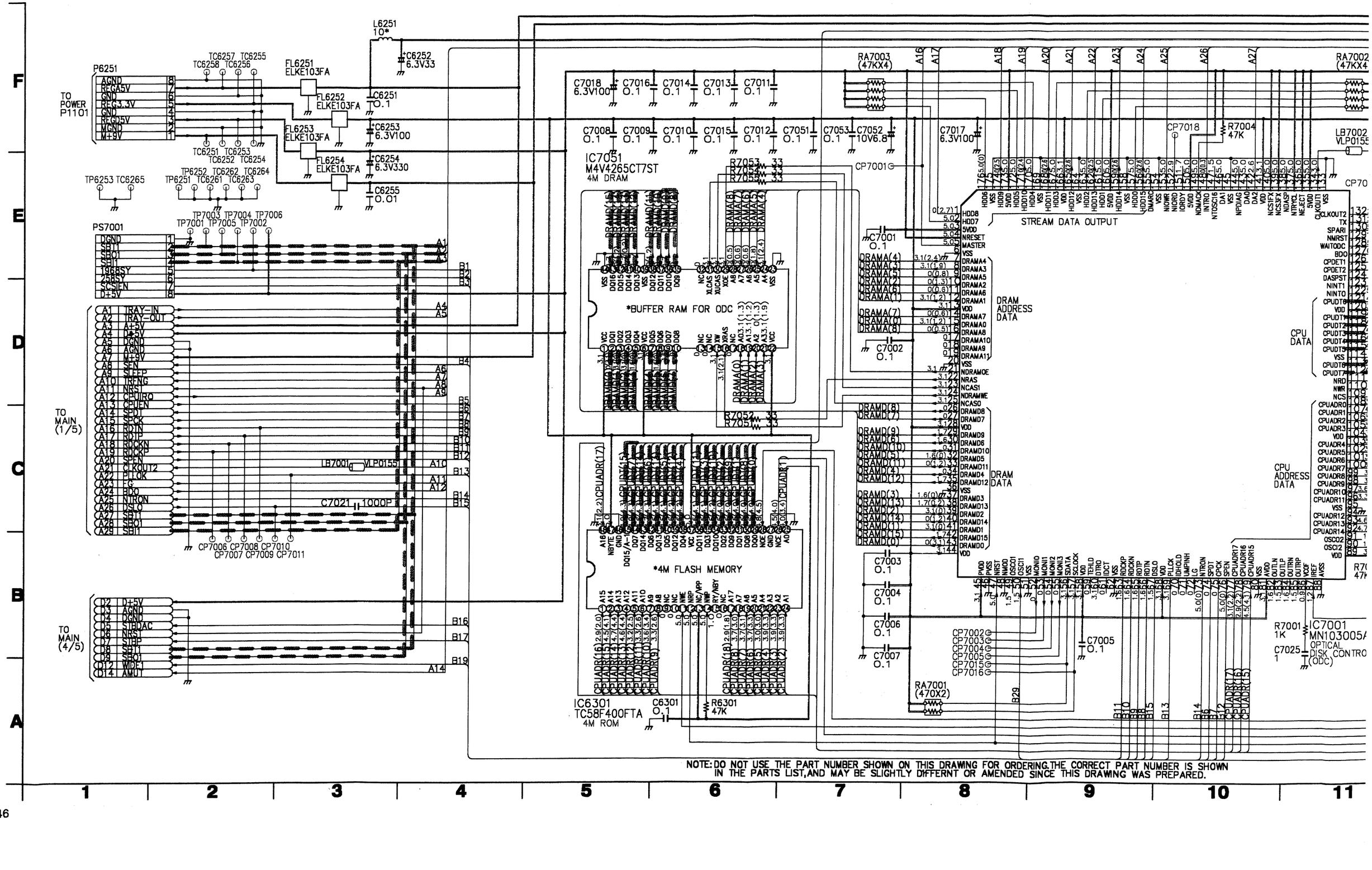


FEP AND ADSC AND SERVO SECTION(MAIN P.W.B.<1/5>)SCHEMATIC DIAGRAMS




IC2001
MN67702VRZC
SERVO DSP
ADSC SECTION REF.NO.22000 SERIES
CTION REF.NO.25200 SERIES
+B LINE
VIDEO
DATA
NOTE: DO NOT USE THE PART NUMBER SHOWN ON THIS DRAWING FOR ORDERING. THE CORRECT PART NUMBER IS SHOWN IN THE PARTS LIST, AND MAY BE SLIGHTLY DIFFERNT OR AMENDED SINCE THIS DRAWING WAS PREPARED.
NOTE: THE MEASURMENT MODE OF THE DC VOLTAGE IN THE BRACKETS ( ) ON THIS DIAGRAM IS PLAYBACK MODE WITH DVD TEST DISC(TITLE 12), AND THE DC VOLTAGE OUT OF BRACKETS IS STOP MODE.

ODC AND CPU SECTION(MAIN P.W.B.<2/5>)SCHEMATIC DIAGRAMS



IC6311
PST596DNR
RESET

IC6312
X25C02ST2
EEPROM

CPU DATA

CPU ADDRESS

CPU ADDRESS DATA

IC6201
MN102L25DN2J
SYSTEM CONTROL
(CPU)

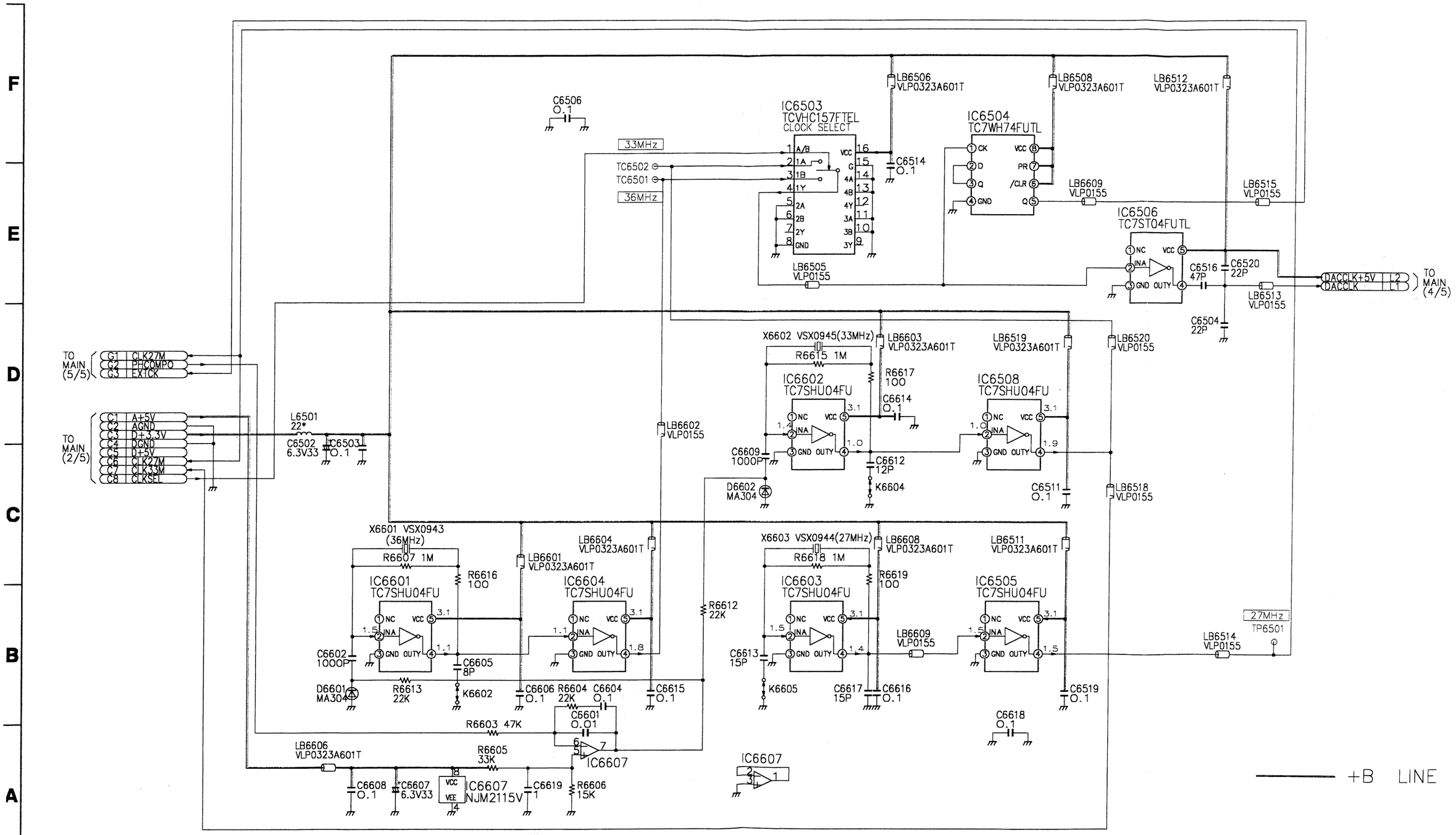
TO MAIN (5/5)

TO MAIN (3/5)

NOTE: THE MEASURMENT MODE OF THE DC VOLTAGE IN THE BRACKETS ( ) ON THIS DIAGRAM IS PLAYBACK MODE
WITH DVD TEST DISC(TITLE 12)AND, THE DC VOLTAGE OUT OF BRACKETS IS STOP MODE.

+B LINE
VIDEO
DATA

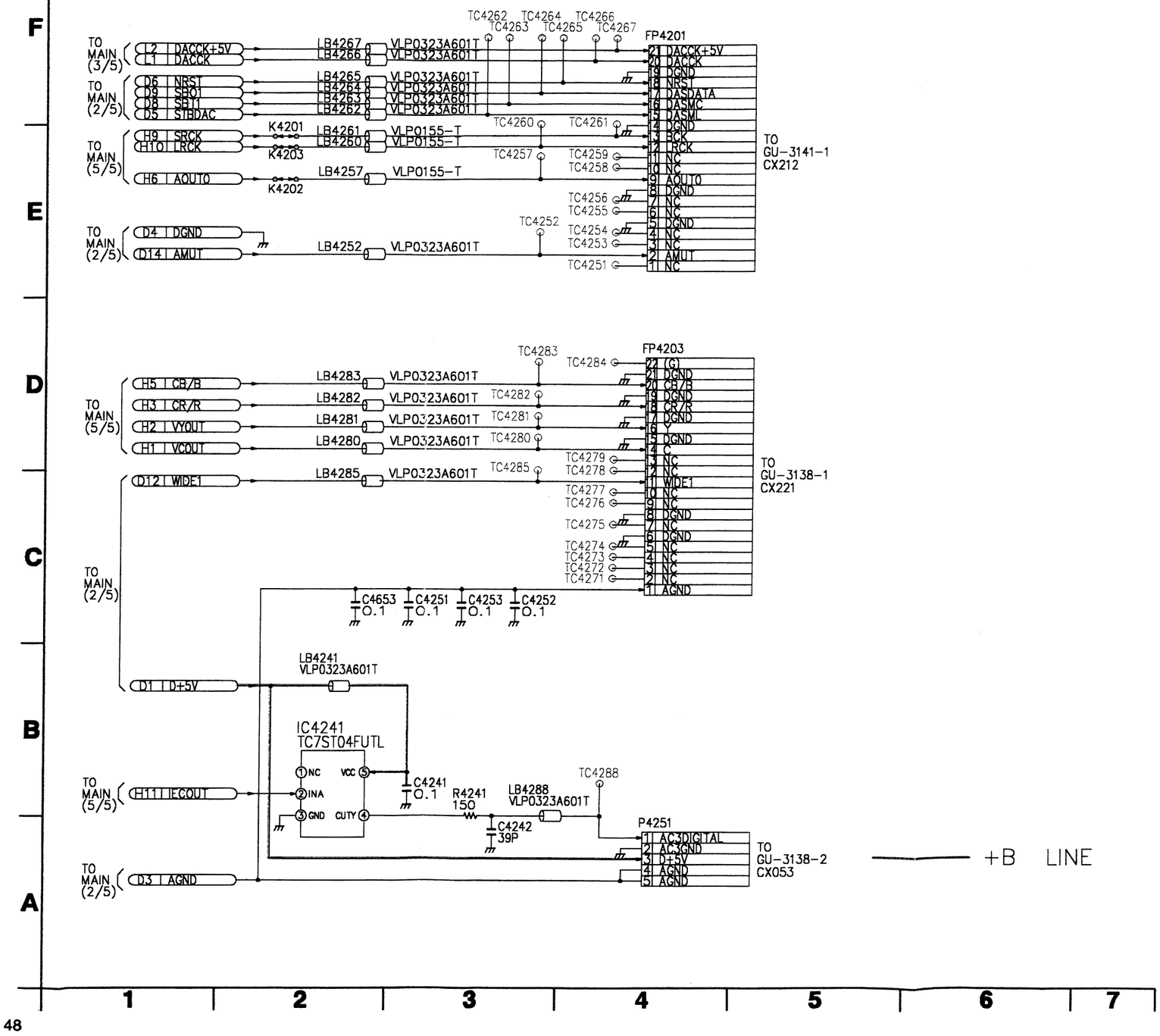
CLOCK SYNC SECTION(MAIN P.W.B.<3/5>)SCHEMATIC DIAGRAMS



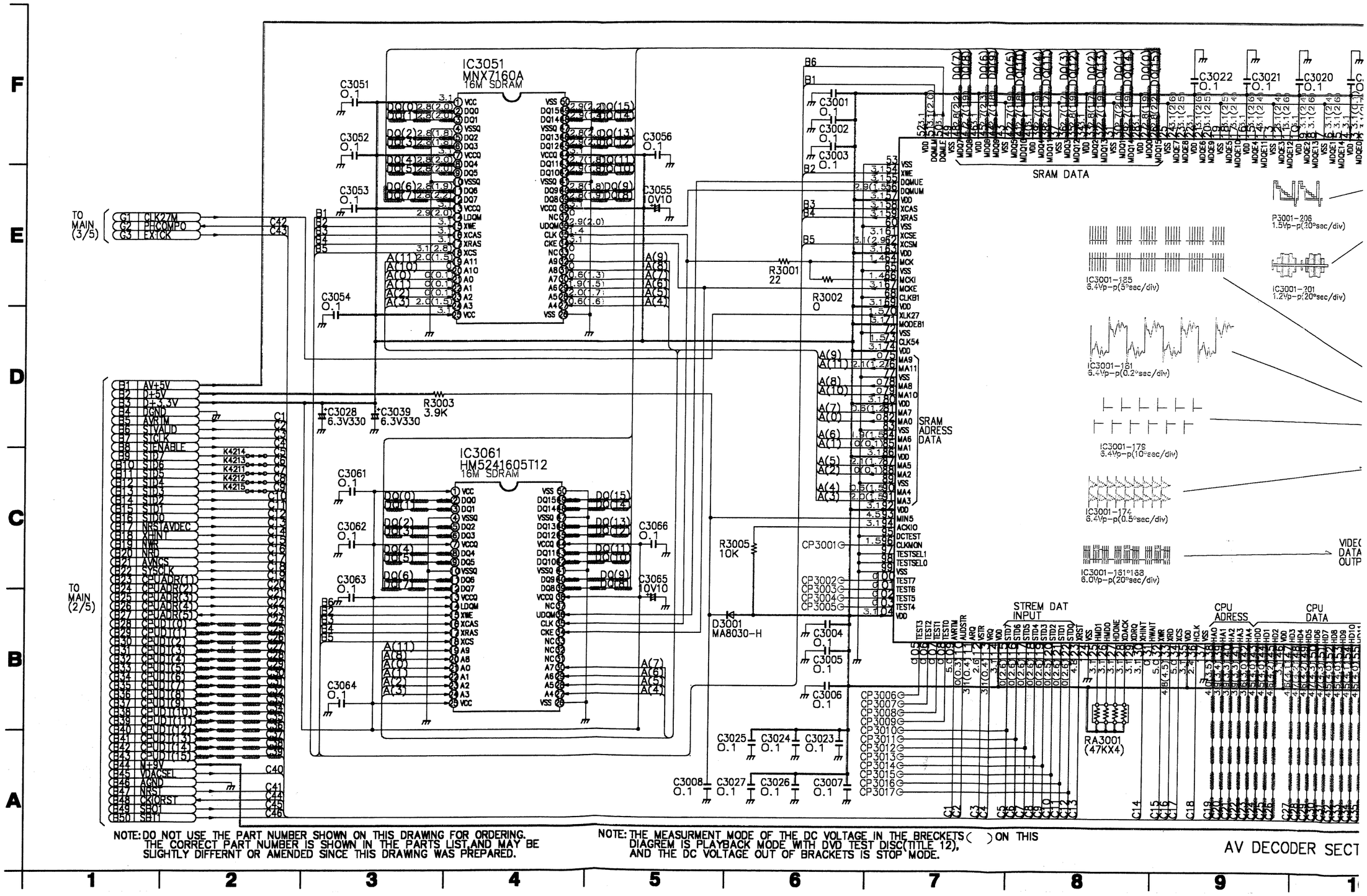
NOTE: DO NOT USE THE PART NUMBER SHOWN ON THIS DRAWING FOR ORDERING. THE CORRECT PART NUMBER IS SHOWN IN THE PARTS LIST, AND MAY BE SLIGHTLY DIFFERNT OR AMENDED SINCE THIS DRAWING WAS PREPARED.

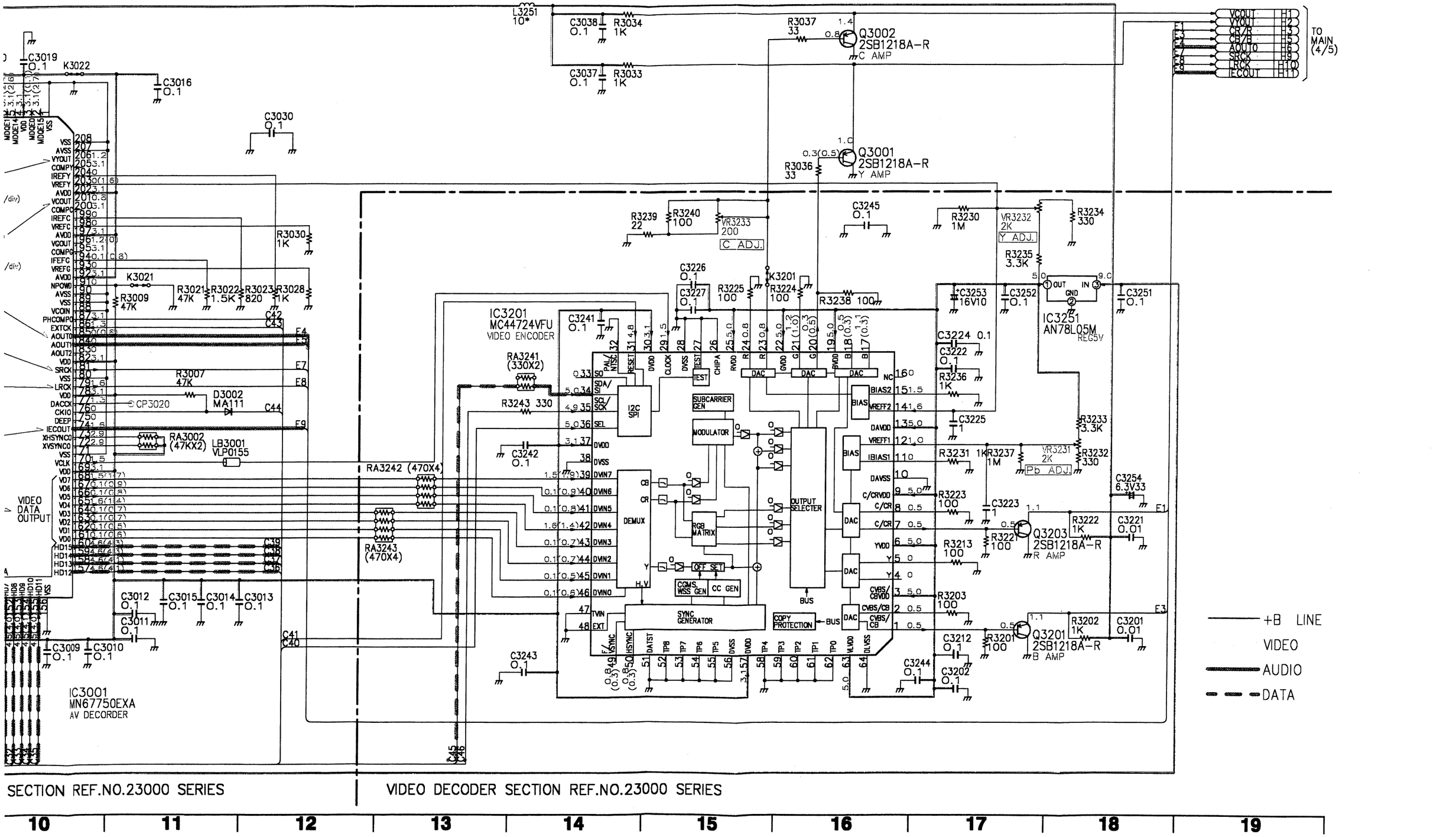
NOTE: THE MEASURMEN MODE OF THE DC VOLTAGE IN THE BRECKETS( ) IN THIS DIAGRAM IS PLAYBACK MODE WITH DVD TEST DISC(TITLE 12), AND THE DC VOLTAGE OUT OF BRACKETS IS STOP MODE.

AUDIO-DAC SECTION (MAIN P.W.B.<4/5>) SCHEMATIC DIAGRAMS



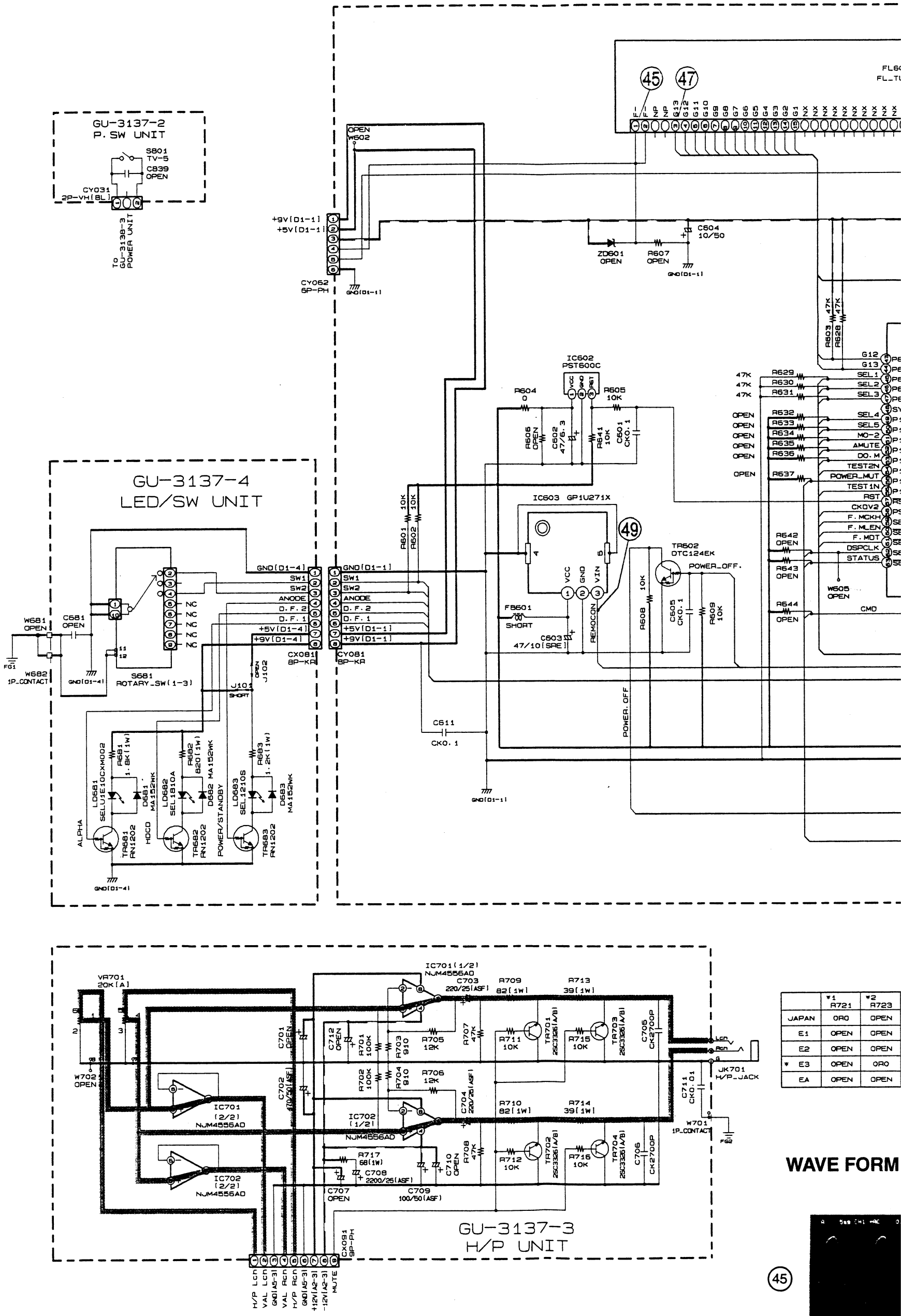
AVDEC AND VIDEO-DAC SECTION(MAIN P.W.B.<5/5>)SCHEMATIC DIAGRAMS


IC3051
MNX7160A
16M SDRAM
IC3061
HM5241605T12
16M SDRAM
SRAM DATA
SRAM ADRESS DATA
STREM DAT INPUT
CPU ADRESS
CPU DATA
TO MAIN (3/5)
TO MAIN (2/5)
D3001 MA8030-H
R3001 22
R3002 0
R3003 3.9K
R3005 10K
RA3001 (47KX4)
P3001-206 1.5Vp-p(20°sec/div)
IC3001-135 6.4Vp-p(5°sec/div)
IC3001-201 1.2Vp-p(20°sec/div)
IC3001-181 6.4Vp-p(0.2°sec/div)
IC3001-179 6.4Vp-p(10°sec/div)
IC3001-174 6.4Vp-p(0.5°sec/div)
IC3001-181*188 6.0Vp-p(20°sec/div)
NOTE: DO NOT USE THE PART NUMBER SHOWN ON THIS DRAWING FOR ORDERING. THE CORRECT PART NUMBER IS SHOWN IN THE PARTS LIST AND MAY BE SLIGHTLY DIFFERNT OR AMENDED SINCE THIS DRAWING WAS PREPARED.
NOTE: THE MEASURMENT MODE OF THE DC VOLTAGE IN THE BRECKETS ( ) ON THIS DIAGREM IS PLAYBACK MODE WITH DVD TEST DISC(TITLE 12), AND THE DC VOLTAGE OUT OF BRACKETS IS STOP MODE.
AV DECODER SECT


IC3001
MN67750EXA
AV DECORDER
VIDEO DATA OUTPUT
IC3201
MC44724VFU
VIDEO ENCODER
IC3251
AN78L05M
REG5V
Q3002
2SB1218A-R
C AMP
Q3001
2SB1218A-R
Y AMP
Q3203
2SB1218A-R
R AMP
Q3201
2SB1218A-R
B AMP
TO MAIN (4/5)
SECTION REF.NO.23000 SERIES
VIDEO DECODER SECTION REF.NO.23000 SERIES
+B LINE
VIDEO
AUDIO
DATA

SCHEMATIC DIAGRAMS (1/5)

1 2 3 4 5 6

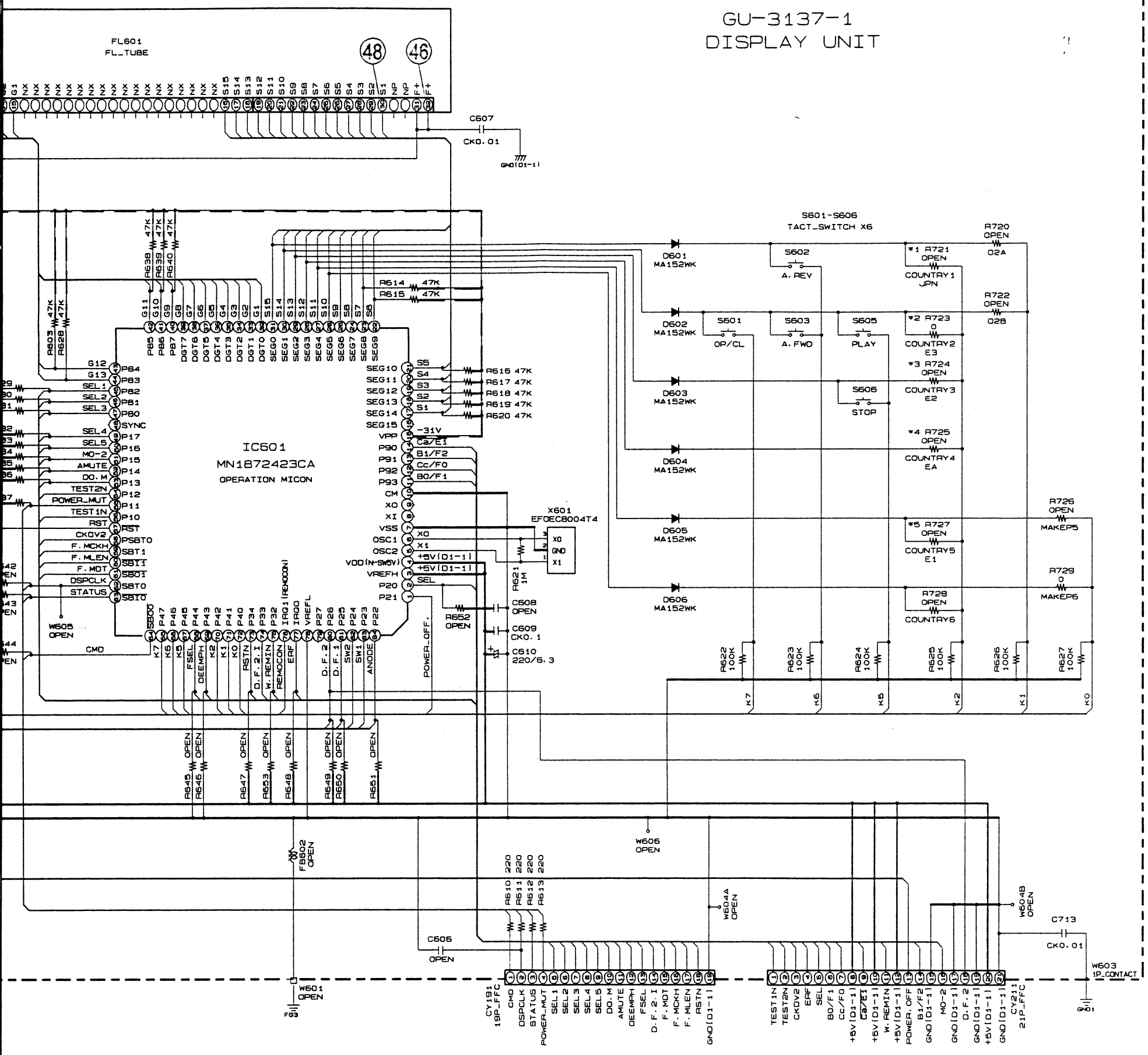


	*1 R721	*2 R723
JAPAN	0R0	OPEN
E1	OPEN	OPEN
E2	OPEN	OPEN
* E3	OPEN	0R0
EA	OPEN	OPEN

WAVE FORM

(45)

GU-3137-1
DISPLAY UNIT



	*1 R721	*2 R723	*3 R724	*4 R725	*5 R727
JAPAN	0R0	OPEN	OPEN	OPEN	OPEN
E1	OPEN	OPEN	OPEN	OPEN	0R0
E2	OPEN	OPEN	0R0	OPEN	OPEN
* E3	OPEN	0R0	OPEN	OPEN	OPEN
EA	OPEN	OPEN	OPEN	0R0	OPEN

NOTICE

ALL RESISTANCE VALUES IN OHM. k=1,000 OHM M=1,000,000 OHM
ALL CAPACITANCE VALUES IN MICRO FARAD. P=MICRO-MICRO FARAD
EACH VOLTAGE AND CURRENT ARE MEASURED AT NO SIGNAL INPUT CONDITION.
CIRCUIT AND PARTS ARE SUBJECT TO CHANGE WITHOUT PRIOR NOTICE.

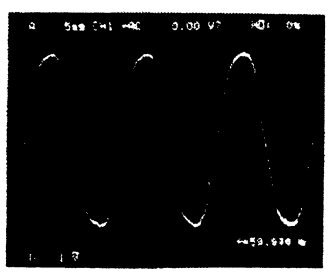
WARNING:
Parts marked with this symbol ⚠ have critical characteristics.
Use ONLY replacement parts recommended by the manufacturer.

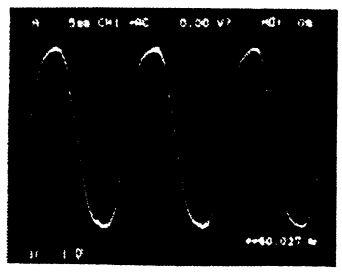
CAUTION:
Before returning the unit to the customer, make sure you make either (1) a leakage current check or (2) a line to chassis resistance check. If the leakage current exceeds 0.5 milliamps, or if the resistance from chassis to either side of the power cord is less than 460 kohms, the unit is detective.

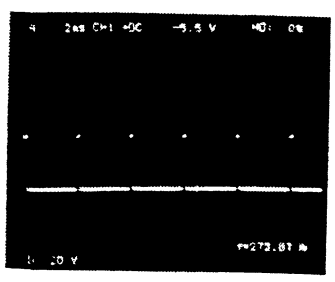
WARNING:
DO NOT return the unit to the customer until the problem is located and corrected.

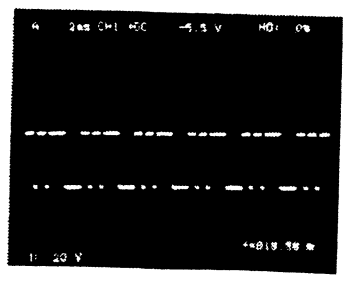
+B LINE
-B LINE
AUDIO SIGNAL LINE

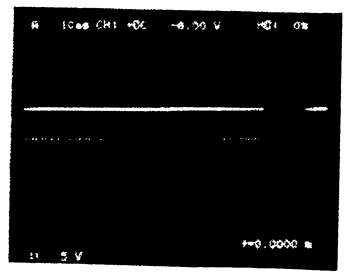
WAVE FORM



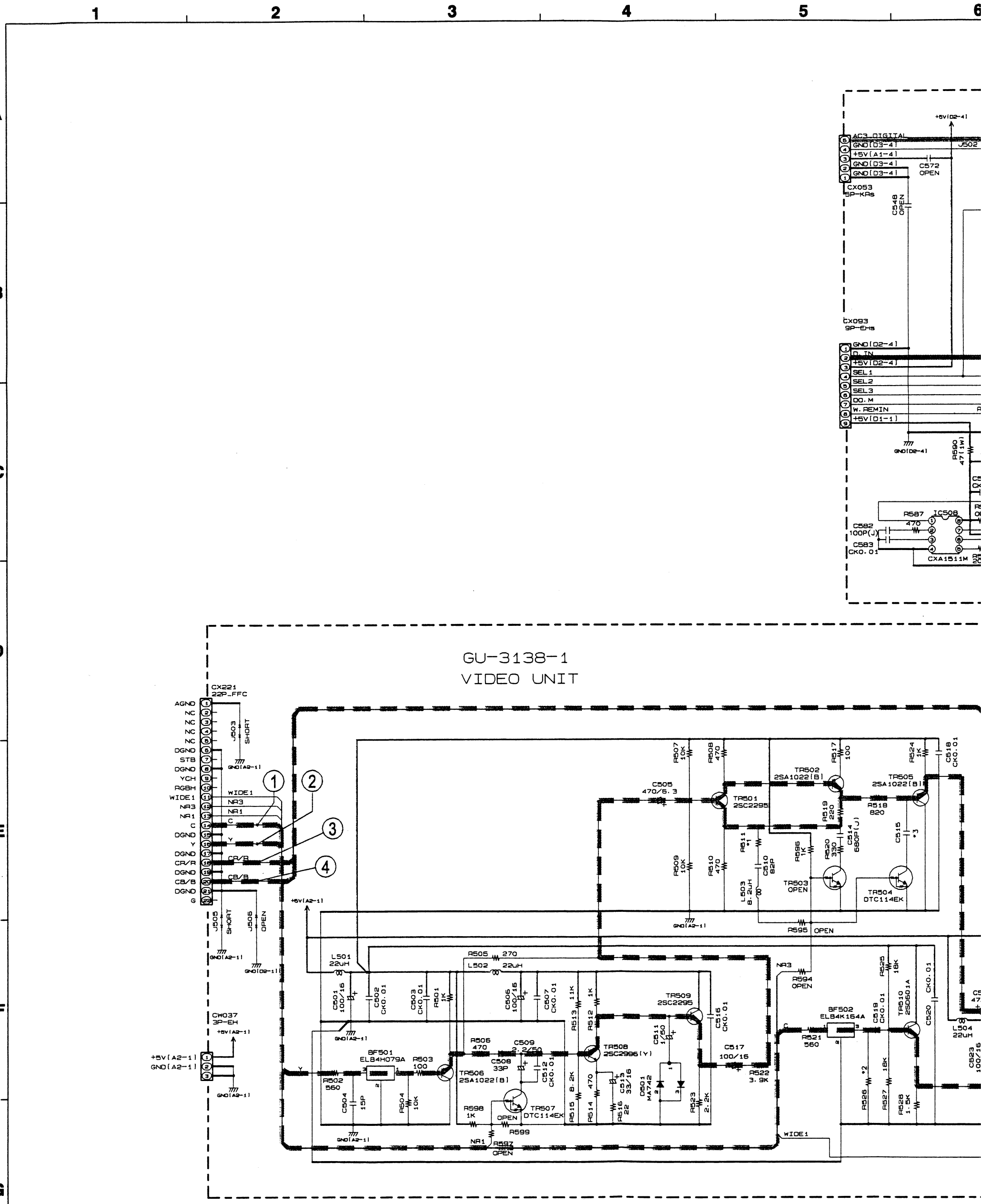








SCHEMATIC DIAGRAMS (2/5)



NOTICE

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ALL CAPACITANCE VALUES IN MICRO FARAD. P=

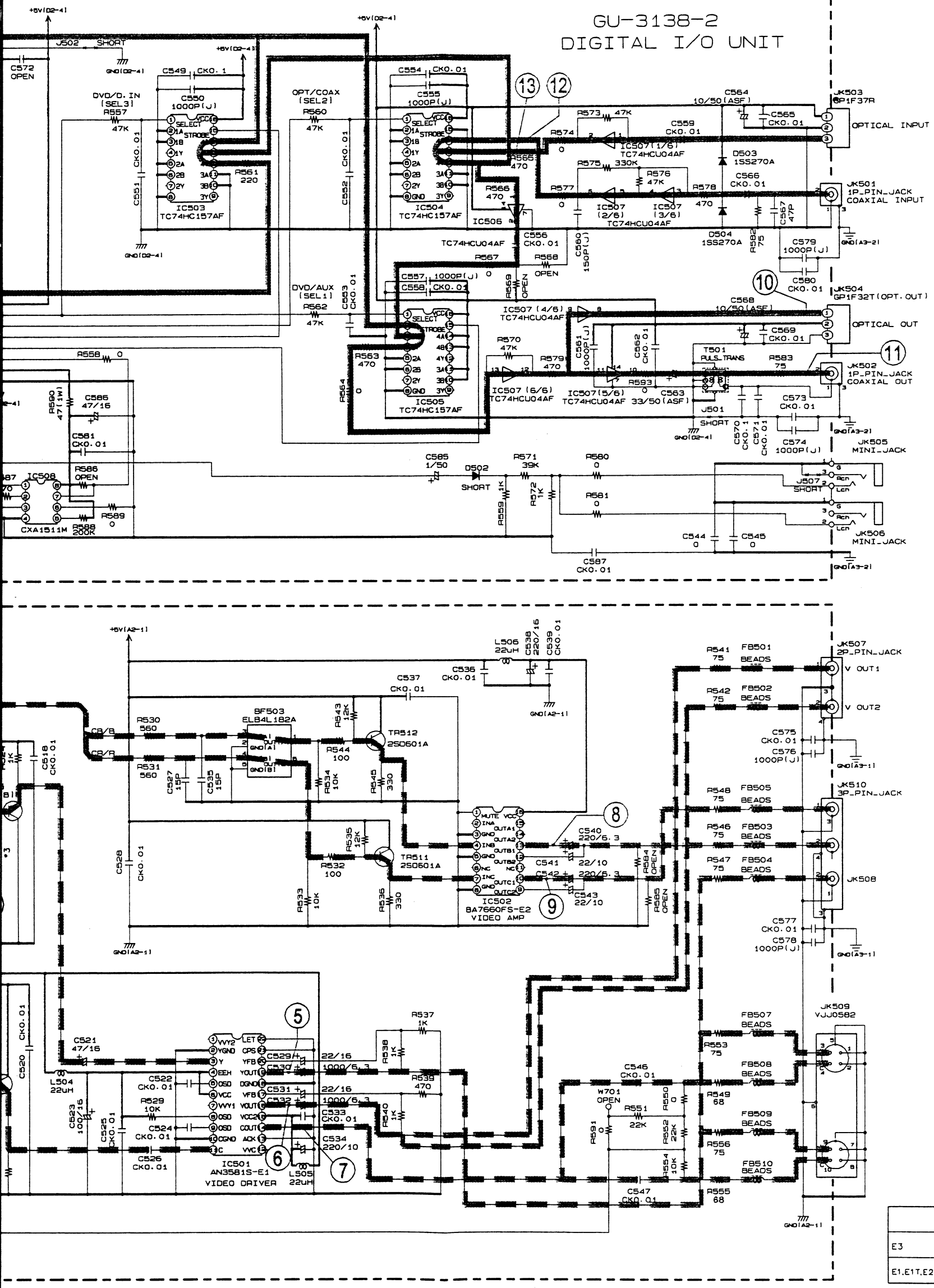
EACH VOLTAGE AND CURRENT ARE MEASURED

CONDITION.

CIRCUIT AND PARTS ARE SUBJECT TO CHANGE

NOTICE.

GU-3138-2
DIGITAL I/O UNIT



	*1 R511	*2 R526	*3 C515
E3	300	2.7K	7P
E1.E1T.E2	270	2.4K	12P

M. k=1,000 OHM M=1,000,000 OHM
ICRO FARAD. P=MICRO-MICRO FARAD
ARE MEASURED AT NO SIGNAL INPUT

CT TO CHANGE WITHOUT PRIOR

WARNING:
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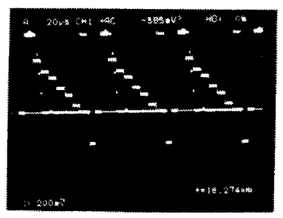
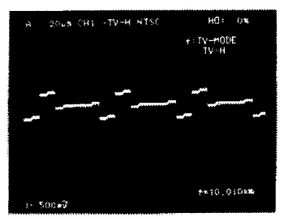
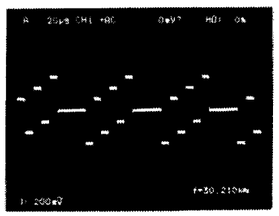
+B LINE
AUDIO SIGNAL LINE
VIDEO SIGNAL LINE

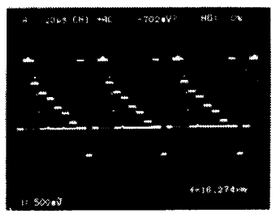
WAVE FORM

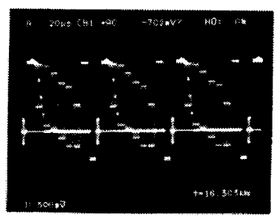
①

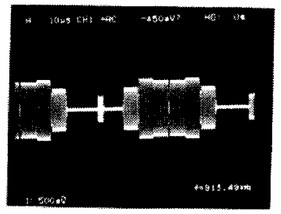
② 

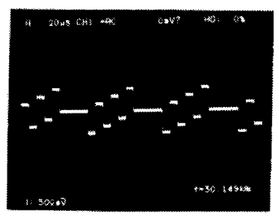
③ 

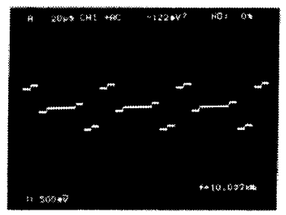
④ 

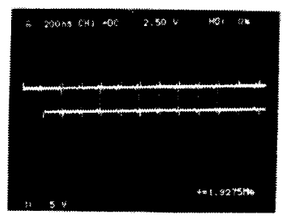
⑤ 

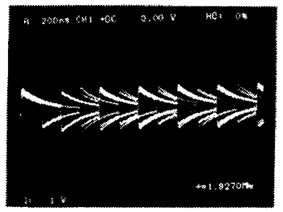
⑥ 

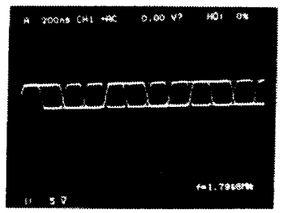
⑦ 

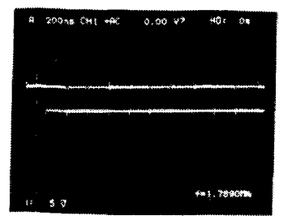
⑧ 

⑨ 

⑩ 

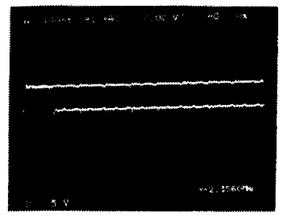
⑪ 

⑫ 

⑬ 

WAVE FORM

(14)



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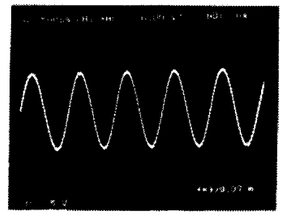

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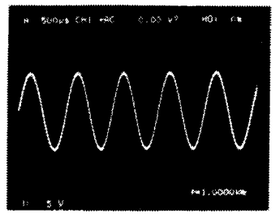

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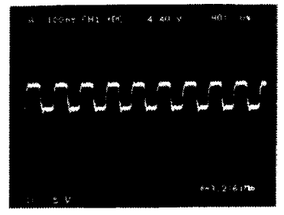

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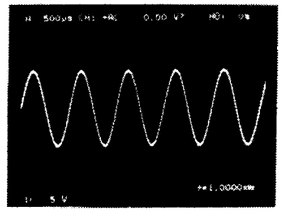

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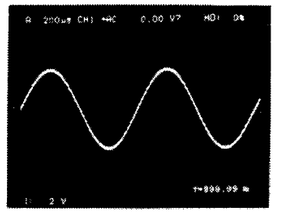

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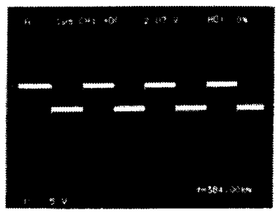

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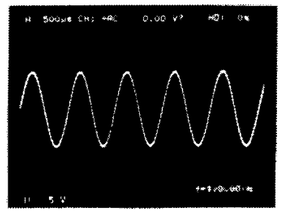

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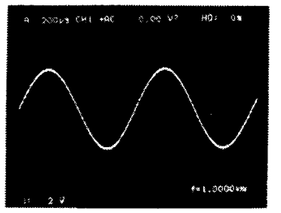
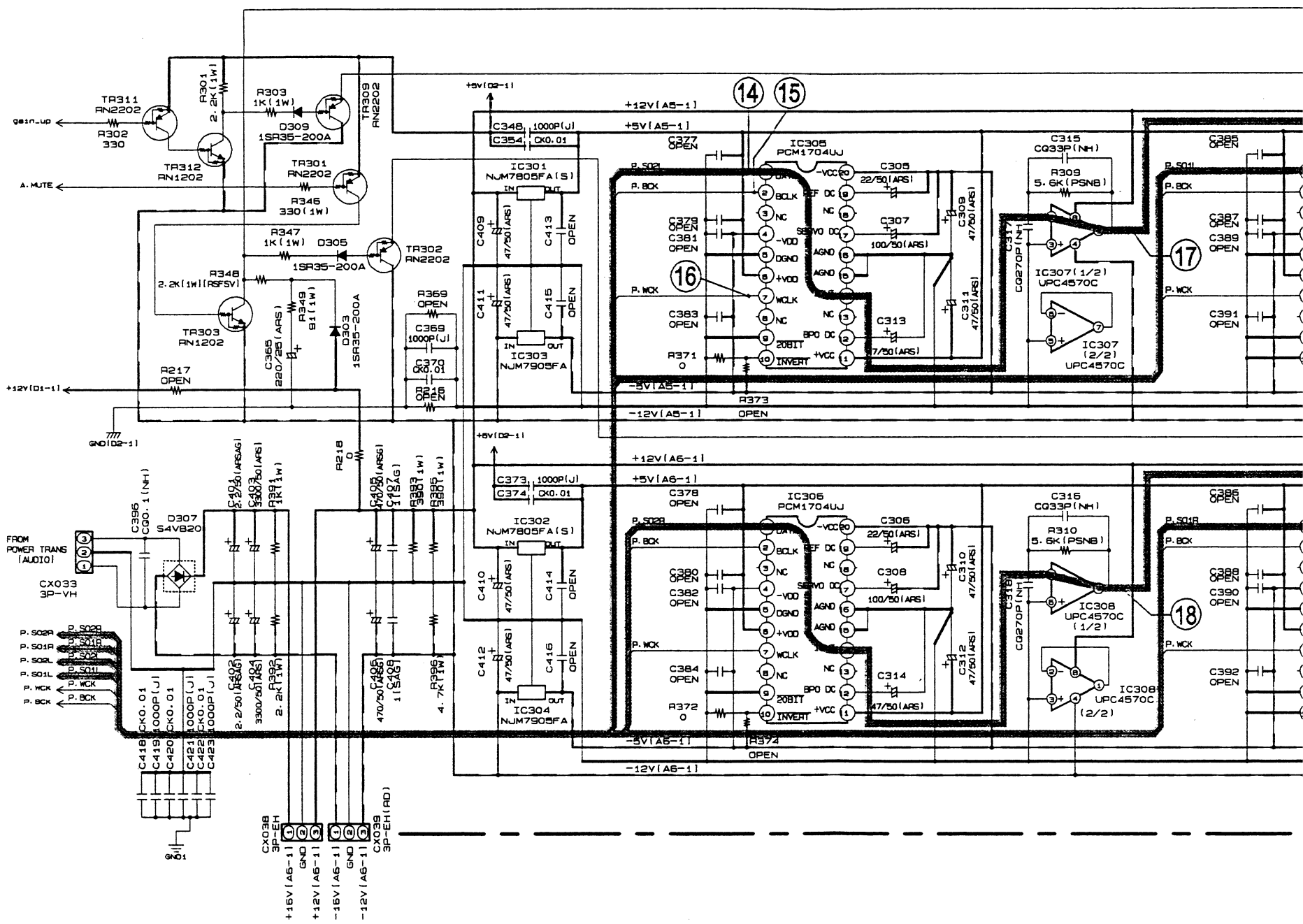
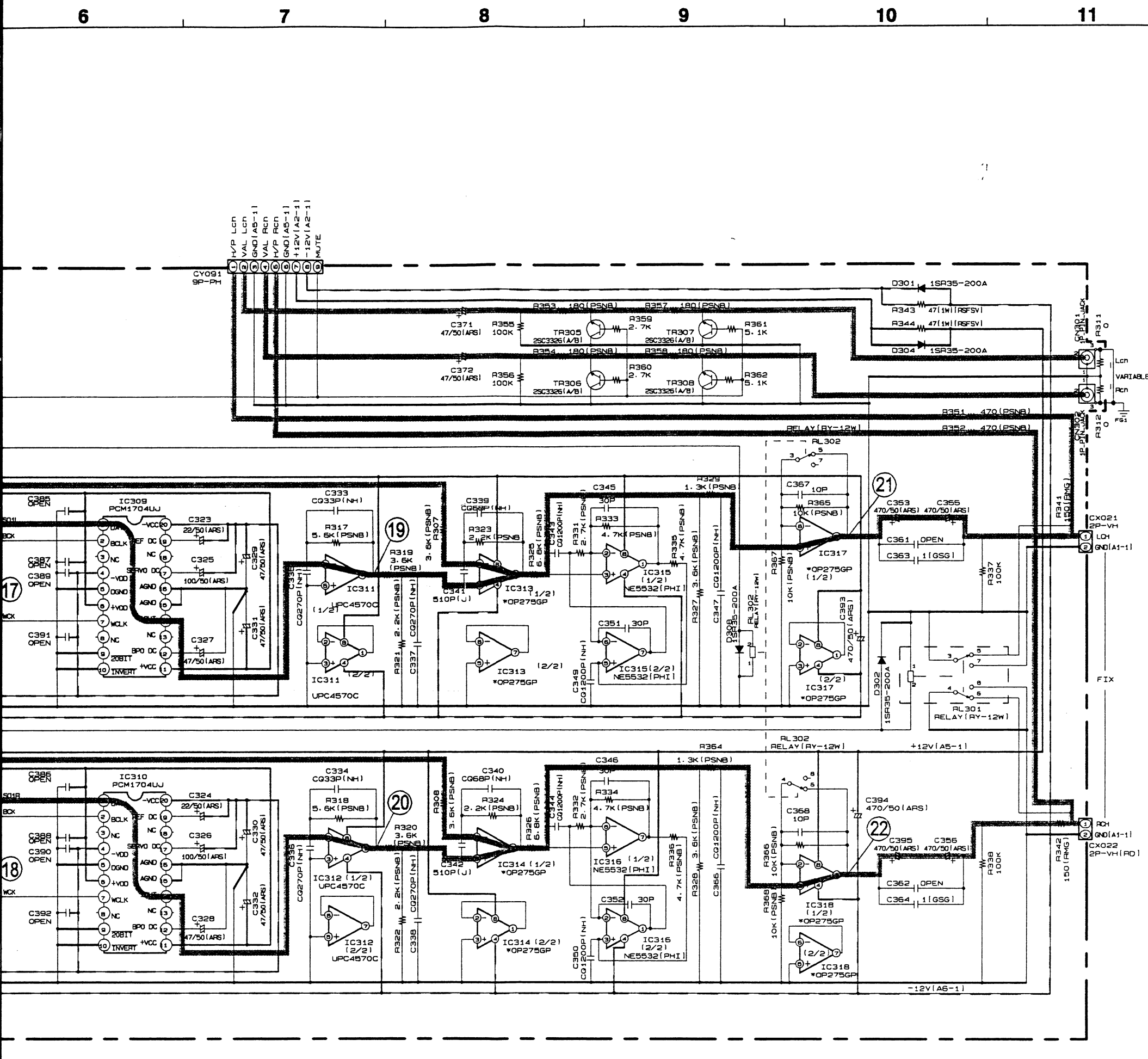


SCHEMATIC DIAGRAMS (3/5)

1 2 3 4 5 6

GU-3141-1 [1/2]
AUDIO I/F UNIT





+B LINE

-B LINE

AUDIO SIGNAL LINE

NOTICE

ALL RESISTANCE VALUES IN OHM. k=1,000 OHM M=1,000,000 OHM
ALL CAPACITANCE VALUES IN MICRO FARAD. P=MICRO-MICRO FARAD
EACH VOLTAGE AND CURRENT ARE MEASURED AT NO SIGNAL INPUT CONDITION.
CIRCUIT AND PARTS ARE SUBJECT TO CHANGE WITHOUT PRIOR NOTICE.

WARNING:

Parts marked with this symbol ⚠ ▨ have critical characteristics.
Use ONLY replacement parts recommended by the manufacturer.

CAUTION:

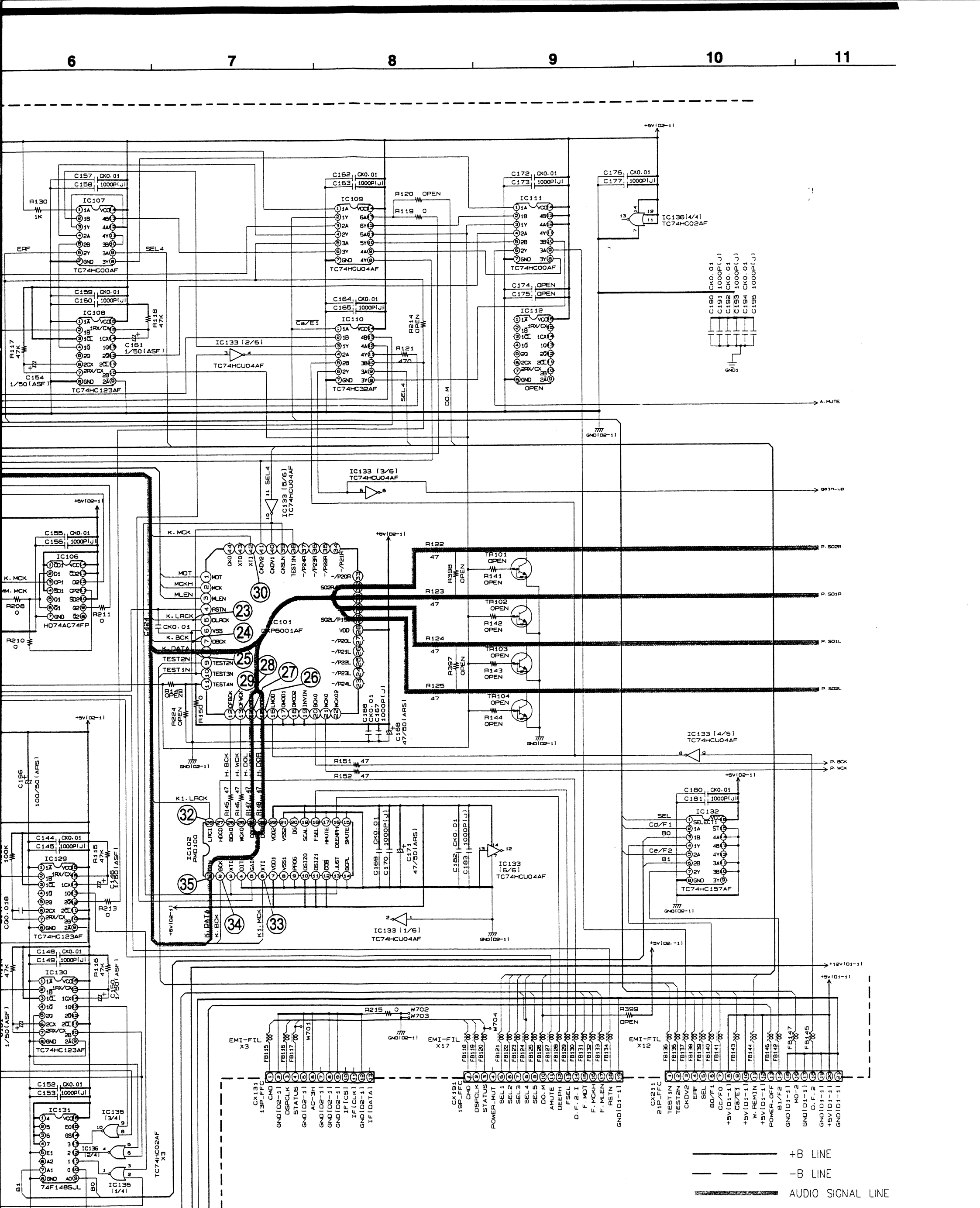
Before returning the unit to the customer, make sure you make either (1) a leakage current check or (2) a line to chassis resistance check. If the leakage current exceeds 0.5 milliamps, or if the resistance from chassis to either side of the power cord is less than 460 kohms, the unit is detective.

WARNING:

DO NOT return the unit to the customer until the problem is located and corrected.

SCHEMATIC DIAGRAMS (4/5)

GU-3141-1 [2/2]
AUDIO I/F UNIT



NOTICE

ALL RESISTANCE VALUES IN OHM. k=1,000 OHM M=1,000,000 OHM

ALL CAPACITANCE VALUES IN MICRO FARAD. P=MICRO-MICRO FARAD

EACH VOLTAGE AND CURRENT ARE MEASURED AT NO SIGNAL INPUT CONDITION.

CIRCUIT AND PARTS ARE SUBJECT TO CHANGE WITHOUT PRIOR NOTICE.

WARNING:

Parts marked with this symbol ⚠ have critical characteristics.
Use ONLY replacement parts recommended by the manufacturer.

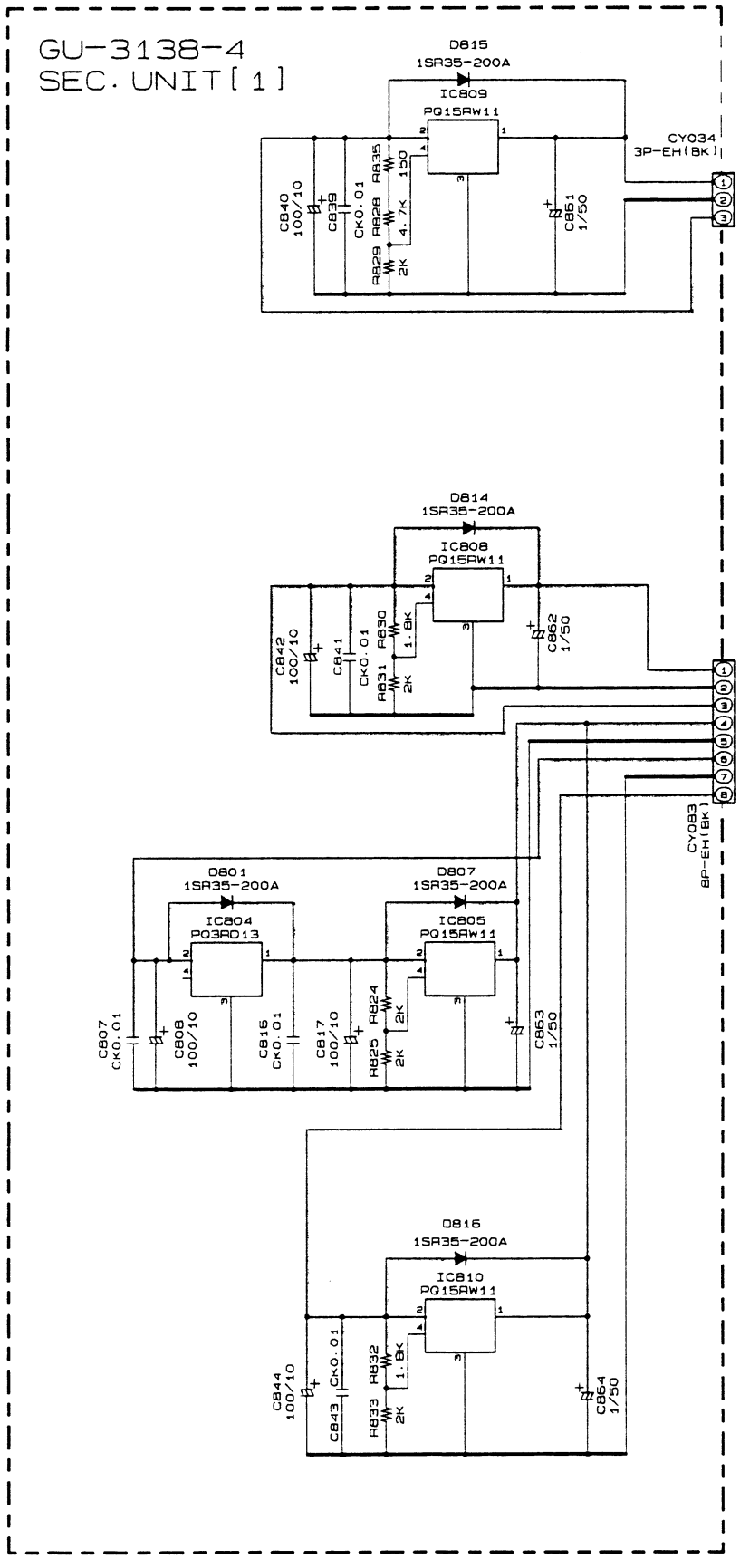
CAUTION:

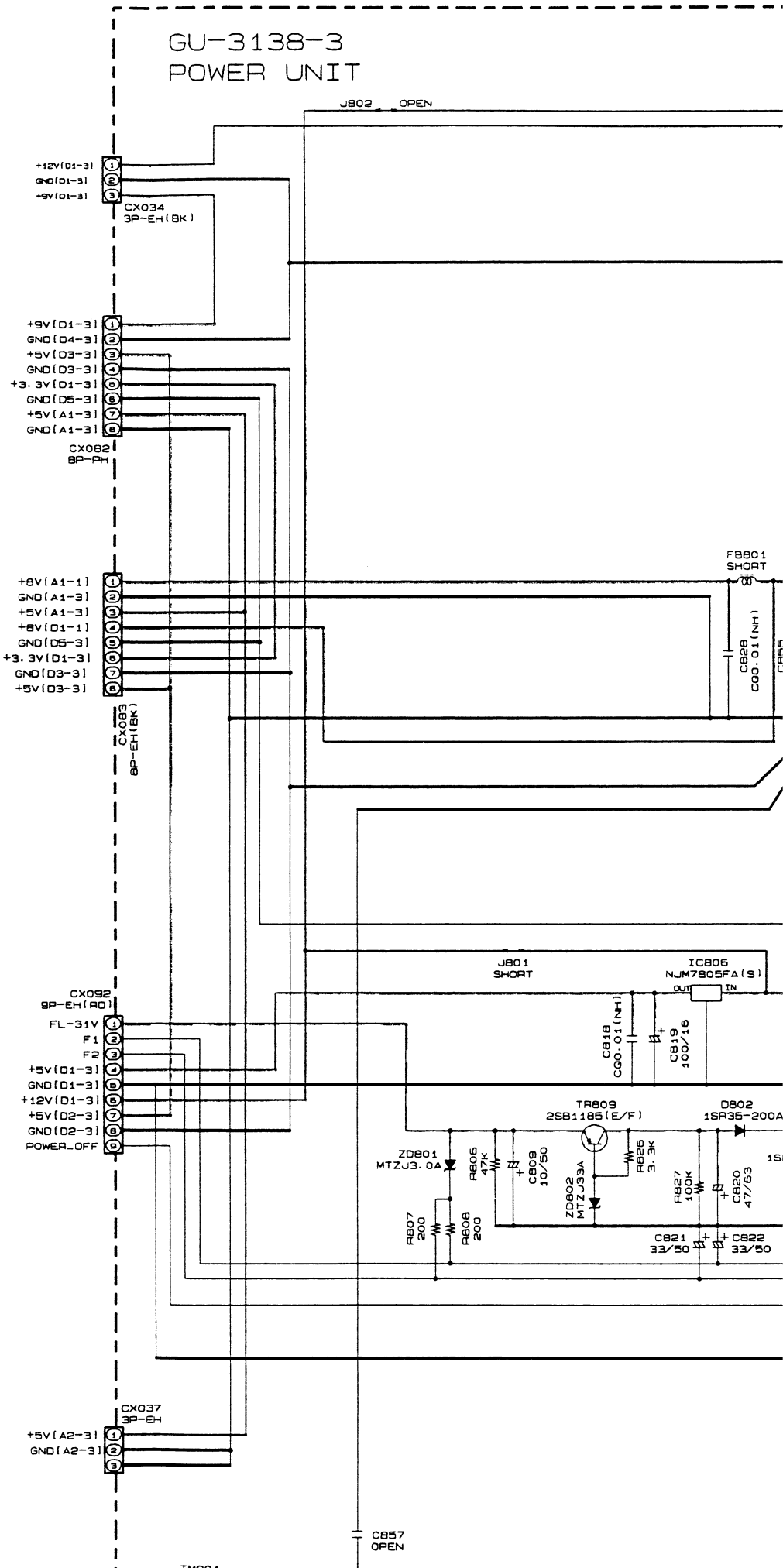
Before returning the unit to the customer, make sure you make either (1) a leakage current check or (2) a line to chassis resistance check. If the leakage current exceeds 0.5 milliamps, or if the resistance from chassis to either side of the power cord is less than 460 kohms, the unit is detective.

WARNING:

DO NOT return the unit to the customer until the problem is located and corrected.

SCHEMATIC DIAGRAMS (5/5)





NOTICE

ALL RESISTANCE VALUES IN OHM. k=1,000 OHM M=1,000,000 OHM

ALL CAPACITANCE VALUES IN MICRO FARAD. P=MICRO-MICRO FARAD

EACH VOLTAGE AND CURRENT ARE MEASURED AT NO SIGNAL INPUT CONDITION.

CIRCUIT AND PARTS ARE SUBJECT TO CHANGE WITHOUT PRIOR NOTICE.

WARNING:

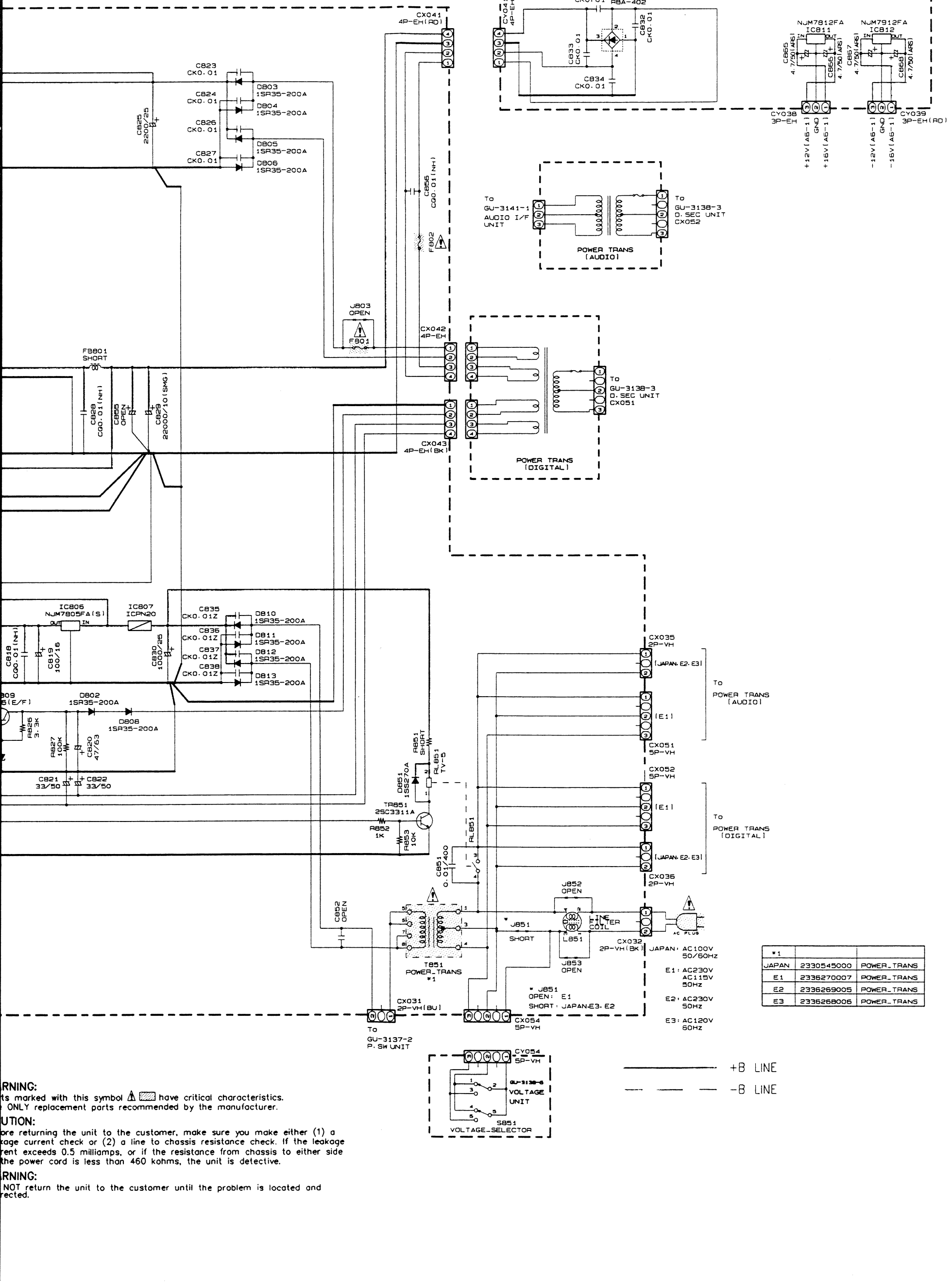
Parts marked with this symbo
Use ONLY replacement parts

CAUTION:

Before returning the unit to t
leakage current check or (2)
current exceeds 0.5 milliamps
of the power cord is less tha

WARNING:

DO NOT return the unit to th
corrected.



*1		
JAPAN	2330545000	POWER_TRANS
E1	2336270007	POWER_TRANS
E2	2336269005	POWER_TRANS
E3	2336268006	POWER_TRANS

RNING:
ts marked with this symbol ⚠ ▭ have critical characteristics.
ONLY replacement parts recommended by the manufacturer.

UTION:
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RNING:
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